



Metro

*One Gateway Plaza, Los Angeles, CA 90012,
3rd Floor, Metro Board Room*

Agenda - Final Revised

Wednesday, January 15, 2025

1:00 PM

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Construction Committee

Fernando Dutra, Chair

Ara J. Najarian, Vice Chair

Hilda Solis

Katy Yaroslavsky

Gloria Roberts, non-voting member

Stephanie Wiggins, Chief Executive Officer

***DUE TO THE CURRENT STATE OF EMERGENCY, THE COMMITTEE WILL MEET
VIRTUALLY.***

METROPOLITAN TRANSPORTATION AUTHORITY BOARD AGENDA RULES
(ALSO APPLIES TO BOARD COMMITTEES)

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Notwithstanding the foregoing, and in accordance with the Brown Act, this agenda does not provide an opportunity for members of the public to address the Board on any Consent Calendar agenda item that has already been considered by a Committee, composed exclusively of members of the Board, at a public meeting wherein all interested members of the public were afforded the opportunity to address the Committee on the item, before or during the Committee's consideration of the item, and which has not been substantially changed since the Committee heard the item.

In accordance with State Law (Brown Act), all matters to be acted on by the MTA Board must be posted at least 72 hours prior to the Board meeting. In case of emergency, or when a subject matter arises subsequent to the posting of the agenda, upon making certain findings, the Board may act on an item that is not on the posted agenda.

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- a. Disorderly behavior toward the Board or any member of the staff thereof, tending to interrupt the due and orderly course of said meeting.
- b. A breach of the peace, boisterous conduct or violent disturbance, tending to interrupt the due and orderly course of said meeting.
- c. Disobedience of any lawful order of the Chair, which shall include an order to be seated or to refrain from addressing the Board; and
- d. Any other unlawful interference with the due and orderly course of said meeting.

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Board Administration

One Gateway Plaza

MS: 99-3-1

Los Angeles, CA 90012

CALL TO ORDER**ROLL CALL**

50. **SUBJECT: STATE OF EMERGENCY - AUTHORIZATION TO MEET VIRTUALLY** [2025-0017](#)

RECOMMENDATION

AS A RESULT of the current state of emergency as proclaimed by the Governor, meeting in person would present imminent risks to the health and safety of the attendees.

Attachments: [Attachment A - Proclamation of a State of Emergency](#)

13. **SUBJECT: BEVERLY HILLS NORTH PORTAL PROJECT** [2024-0521](#)

RECOMMENDATION

AUTHORIZE the Chief Executive Officer to discontinue the Beverly Hills North Portal Project and initiate Project closeout.

Attachments: [Attachment A - City of Beverly Hills Agenda Report Dated May 7, 2024 Presentation](#)

14. **SUBJECT: CALTRANS QUARTERLY CONSTRUCTION PROJECTS UPDATE** [2024-1091](#)

RECOMMENDATION

RECEIVE the quarterly oral report on the status of the Caltrans construction projects.

Attachments: [Presentation](#)

15. **SUBJECT: PROGRAM MANAGEMENT PROJECT STATUS** [2024-1116](#)

RECOMMENDATION

RECEIVE AND FILE the Program Management Project Status Report.

Attachments: [Attachment A - Equity Assessments Presentation](#)

16. **SUBJECT: PROGRAM MANAGEMENT QUARTERLY CHANGE REPORT** [2024-1118](#)

RECOMMENDATION

RECEIVE AND FILE Status Report on Program Management Quarterly Change Report.

Attachments: [Attachment A - Quarterly Change Orders Log for Period of 9/1/2024-11/30/2024](#)
[Attachment B - OIG Con. Change Order Spot Checks \(Through Nov. 2024\)](#)

17. **SUBJECT: OFFICE OF THE INSPECTOR GENERAL CONSTRUCTION CHANGE ORDER SPOT CHECKS** [2024-1075](#)

RECOMMENDATION

RECEIVE AND FILE Office of the Inspector General Construction Change Order Spot Check Report for the period September 1 to November 30, 2024.

Attachments: [Attachment A - Change Order Details for Spot Checks in this Report](#)
[Attachment B - OIG Recommendations and Responses Tracking Sheet Presentation](#)

- SUBJECT: GENERAL PUBLIC COMMENT** [2024-1157](#)

RECEIVE General Public Comment

GENERAL PUBLIC COMMENT

Consideration of items not on the posted agenda, including: items to be presented and (if requested) referred to staff; items to be placed on the agenda for action at a future meeting of the Committee or Board; and/or items requiring immediate action because of an emergency situation or where the need to take immediate action came to the attention of the Committee subsequent to the posting of the agenda.

COMMENTS FROM THE PUBLIC ON ITEMS OF PUBLIC INTEREST WITHIN COMMITTEE'S SUBJECT MATTER JURISDICTION

Adjournment



Board Report

File #: 2025-0017, **File Type:** Proclamation

Agenda Number: 50.

**CONSTRUCTION COMMITTEE
JANUARY 15, 2025**

SUBJECT: STATE OF EMERGENCY - AUTHORIZATION TO MEET VIRTUALLY

ACTION: APPROVE RECOMMENDATION

RECOMMENDATION

AS A RESULT of the current state of emergency as proclaimed by the Governor, meeting in person would present imminent risks to the health and safety of the attendees.

**EXECUTIVE DEPARTMENT
STATE OF CALIFORNIA**

PROCLAMATION OF A STATE OF EMERGENCY

WHEREAS on January 7, 2025, the Palisades Fire ignited in Los Angeles County, burning over 1,200 acres as of the time this Proclamation is issued; and

WHEREAS high winds, low humidity, and dry conditions have increased the intensity and spread of the Palisades Fire, causing imminent threat to life with Red Flag warnings in effect in Los Angeles and Ventura Counties and widespread dangerous windstorm conditions with damaging wind gusts of 50 to 80 mph forecasted; and

WHEREAS the Palisades Fire and windstorm conditions threaten structures, homes, and critical infrastructure, including power lines and water tanks, and have prompted evacuation orders and warnings and impacted the access route to the Palisades Highlands community; and

WHEREAS in response to a request from the Governor's Office of Emergency Services, the Federal Emergency Management Agency approved a Fire Management Assistant Grant to assist with the mitigation, management, and control of the Palisades Fire on January 7, 2025; and

WHEREAS under the provisions of Government Code section 8558(b), I find that conditions of extreme peril to the safety of persons and property exist due to impacts of the Palisades Fire and windstorm conditions in Los Angeles and Ventura Counties; and

WHEREAS under the provisions of Government Code section 8558(b), I find that the conditions caused by the Palisades Fire and windstorm conditions, by reason of their magnitude, are beyond the control of the services, personnel, equipment, and facilities of any single local government and require the combined forces of a mutual aid region or regions to appropriately respond; and

WHEREAS under the provisions of Government Code section 8625(c), I find that local authorities are inadequate to cope with the magnitude of the damage caused by the Palisades Fire and windstorm conditions; and

WHEREAS under the provisions of Government Code section 8571, I find that strict compliance with various statutes and regulations specified in this Proclamation would prevent, hinder, or delay the mitigation of the effects of the Palisades Fire and windstorm conditions.

NOW, THEREFORE, I, GAVIN NEWSOM, Governor of the State of California, in accordance with the authority vested in me by the State Constitution and statutes, including the California Emergency Services Act, and in particular, Government Code section 8625, **HEREBY PROCLAIM A STATE OF EMERGENCY** to exist in Los Angeles and Ventura Counties due to the Palisades Fire and windstorm conditions.

IT IS HEREBY ORDERED THAT:

1. All agencies of the state government utilize and employ state personnel, equipment, and facilities for the performance of any and all activities consistent with the direction of the Office of Emergency Services and the State Emergency Plan. Also, all residents are to obey the direction of emergency officials with regard to this emergency in order to protect their safety.
2. The Office of Emergency Services shall provide assistance to local governments, if appropriate, under the authority of the California Disaster Assistance Act, Government Code section 8680 et seq., and California Code of Regulations, Title 19, section 2900 et seq.
3. As necessary to assist local governments and for the protection of public health and the environment, state agencies shall enter into contracts to arrange for the procurement of materials, goods, and services necessary to quickly assist with the response to and recovery from the impacts of this emergency. Applicable provisions of the Government Code and the Public Contract Code, including but not limited to travel, advertising, and competitive bidding requirements, are suspended to the extent necessary to address the effects of this emergency.
4. The California National Guard may be mobilized under Military and Veterans Code section 146 to support disaster response and relief efforts, as directed by the Office of Emergency Services, and to coordinate with all relevant state agencies and state and local emergency responders and law enforcement within the impacted areas. Sections 147 and 188 of the Military and Veterans Code are applicable during the period of participation in this mission, exempting the California Military Department from applicable procurement rules for specified emergency purchases, and those rules are hereby suspended.
5. Adequate state staffing during this emergency is necessary for all state agencies and departments with an assigned response and/or recovery role. Consistent with applicable federal law, work hour limitations for retired annuitants, permanent and intermittent personnel, and state management and senior supervisors, are suspended. Furthermore, reinstatement and work hour limitations in Government Code sections 21220, 21224(a), and 7522.56(b), (d), (f), and (g), and the time limitations in Government Code section 19888.1 and California Code of Regulations, title 2, sections 300-303 are suspended. All other restrictions must be adhered to for retired annuitants. The Director of the California Department of Human Resources must be notified of any individual employed in state government pursuant to these suspensions. The suspension of statutes identified in this Paragraph shall also apply to local governments, as applicable, to ensure adequate staffing to appropriately respond to this emergency in Los Angeles and Ventura Counties. Local governmental agencies shall notify the California Public Employees' Retirement System of any individual employed by an agency pursuant to this Paragraph.

6. The limitation for the period of employment for State Personnel Board emergency appointments, as provided in Government Code section 19888.1, is suspended for positions required for emergency response and/or recovery operations related to this emergency in Los Angeles and Ventura Counties. The requirements and period of employment for such appointments will be determined by the Office of Emergency Services, but shall not extend beyond the termination date of the State of Emergency.

I FURTHER DIRECT that as soon as hereafter possible, this Proclamation be filed in the Office of the Secretary of State and that widespread publicity and notice be given of this Proclamation.

This Proclamation is not intended to, and does not, create any rights or benefits, substantive or procedural, enforceable at law or in equity, against the State of California, its agencies, departments, entities, officers, employees, or any other person.

IN WITNESS WHEREOF I have hereunto set my hand and caused the Great Seal of the State of California to be affixed this 7th day of January 2025.



GAVIN NEWSOM
Governor of California

ATTEST:

SHIRLEY WEBER, PH.D.
Secretary of State

**Board Report**

File #: 2024-0521, **File Type:** Informational Report**Agenda Number:** 13.

**CONSTRUCTION COMMITTEE
JANUARY 15, 2025****SUBJECT: BEVERLY HILLS NORTH PORTAL PROJECT****ACTION: APPROVE RECOMMENDATION****RECOMMENDATION**

AUTHORIZE the Chief Executive Officer to discontinue the Beverly Hills North Portal Project and initiate Project closeout.

ISSUE

On May 7, 2024, the City of Beverly Hills City Council approved a recommendation from City staff to discontinue the Beverly Hills North Portal (North Portal) second entrance/exit to the Wilshire/Rodeo Station. The City of Beverly Hills (City) cited the forecasted cost increase beyond the budget stipulated by a settlement agreement executed between Metro and the City on November 10, 2020, as its reason for discontinuing the North Portal.

BACKGROUND

The Purple Line Extension Section 2 Project (PLE2) is the second of three sections of the nine-mile Purple Line Extension. PLE2 ranges from the future Wilshire/La Cienega Station (part of the Purple Line Extension Section 1 Project) to Century City. PLE2 is located entirely underground, primarily following Wilshire Boulevard, and includes the design and construction of approximately 2.59 miles of double-track heavy rail subway and two new stations, as well as the purchase of 20 heavy rail vehicles. The Wilshire/Rodeo Station is within the jurisdiction of the City of Beverly Hills, and the Century City Station is within the jurisdiction of the City of Los Angeles.

On November 10, 2020, in response to stakeholder feedback on the Memorandum of Agreement (MOA) between the City of Beverly Hills and Metro regarding PLE2, the City and Metro executed a settlement agreement that included a framework for developing a second entrance/exit to the Wilshire/Rodeo Station on the north side of Wilshire Boulevard. The scope of the North Portal, as described in the Settlement Agreement, included the design and construction of facilities inside and outside the Wilshire/Rodeo Station and included assistance from Metro to the City to ensure compliance with Metro Standards. According to the City's Environmental Impact Report, the City described the following purpose for adding the North Portal: "Through the provision of the North Portal, the City seeks to provide enhanced passenger access to the Beverly Hills Business Triangle

and minimize pedestrian crossings on Wilshire Boulevard, which is a prime local and regional destination and a key hub for tourism, shopping, and dining experiences bounded by North Santa Monica Boulevard to the north, Wilshire Boulevard to the south, and Crescent Drive to the east. North of Wilshire Boulevard in the station area is also a major employment center, and the City is seeking to support commuting workers in this area through the provision of a more convenient station entrance/exit that will minimize the need for pedestrians to cross Wilshire Boulevard to improve pedestrian access, reduce the risks of automobile/pedestrian conflicts, and avoid traffic congestion.”

The Settlement Agreement requires each party to contribute up to 50% of the total cost of the North Portal, which was estimated to be \$78,500,000 at the time the Settlement Agreement was executed.

On May 18, 2022, Metro established a Life of Project (LOP) budget of \$29,250,000 for the North Portal to satisfy the terms and conditions set forth in the Settlement Agreement. Metro’s contribution includes the use of PLE2 contingency to pay for modifications inside the Wilshire/Rodeo Station needed to access the North Portal. The North Portal scope of work outside the Wilshire/Rodeo Station footprint is not part of the PLE2 scope.

In March 2023, the City’s design consultant prepared an updated cost estimate for the North Portal, which calculated a significantly higher cost than the conceptual estimate used to establish the budget stipulated in the Settlement Agreement.

Per Article 2.4.3 of the Settlement Agreement, “the Parties shall determine whether they still desire to complete the North Portal and make financial contributions toward the North Portal...” The recent City Council action demonstrates that the City will not pursue the North Portal.

The Settlement Agreement also states: “If Metro determines to pursue the North Portal, but the City does not, then the City shall deposit the remaining portion of its half share of the Budget, if any, into the Project Account and shall have no further funding obligations toward the North Portal. If neither Party agrees to pursue the North Portal, then neither Party shall have further funding obligations toward the North Portal, and remaining funds in the Project Account shall be used to pay any remaining joint financial obligations and then returned to the Parties in accordance with Section 2.6.6.”

Section 2.6.6 of the Settlement Agreement states: “Once all invoices submitted by the Parties have been paid out of the Project Account and all other obligations relating to the North Portal are satisfied, any remaining funds in the Project Account shall be returned to the Parties in proportion to each Party’s respective contribution of funds to the North Portal project.”

DISCUSSION

Metro and the City each made steady progress toward their obligations for the North Portal as stipulated in the Settlement Agreement up until March 2023. Major milestones completed are the following:

- September 2020 - Metro issued a change to the PLE2 design-build contractor to provide design services to modify the interior of the Wilshire/Rodeo station box to accommodate the

North Portal which was in conceptual design by the City.

- October 2020 - The City received CEQA clearance for the North Portal Final Environmental Impact Report (EIR).
- August 2021 - Metro issued a change to the PLE2 design-build contractor to provide construction services to modify the interior of the Wilshire/Rodeo station box to accommodate the North Portal that was to be constructed by the City.
- October 2021 - Metro received NEPA clearance from the FTA to move forward with the addition of the North Portal based on the City's EIR.
- September 2021 - The City released a Request for Proposal to procure engineering services for the North Portal final design and selected HDR Engineering.
- April 2022 - The City awarded the North Portal Design Contract to HDR after gaining City Council approval on April 12, 2022.
- August 2022 - HDR submitted the 15% preliminary design for the North Portal to Metro and City for review.
- January 2023 - HDR submitted a revised construction cost estimate based on the approved 15% preliminary design for the North Portal.
- February 2023 - Metro and the City met to discuss the findings from the North Portal design report and agreed on the revised construction cost estimate.
- March 2023 - The City's updated cost estimate for the North Portal is published.

The City estimated that the revised total cost for the North Portal would be \$134,200,000. This is significantly higher than the not-to-exceed amount of \$78,500,000 indicated in the Settlement Agreement. City staff attributed this cost increase to several factors including an increase in construction costs over the past four years, a surge in demand for construction materials; increased prices due to more construction projects worldwide; ongoing supply chain challenges; and rising labor and transportation costs. City staff reported that the cost of labor has also increased due to the demand for skilled construction workers, particularly in high-growth regions, and the increases continue to be shown in the recent bids for various City Capital Improvement Projects. As a result, on May 7, 2024, the City Council approved their staff's recommendation to discontinue the North Portal due to the cost exceedance. A copy of the City's Agenda Report presenting their findings is provided in Attachment A.

The Settlement Agreement between Metro and the City stipulated that if total costs for the North Portal exceeded the budget and one party decided not to pursue the North Portal, the other party would be responsible to fund the entire cost increase if it continued to pursue the North Portal alone. Since the supplemental entrance was not required by Metro's FEIR for the PLE2, it is recommended that Metro follow the City's action to discontinue the North Portal and mutually cease further expenditures.

DETERMINATION OF SAFETY IMPACT

This recommendation has no safety impact and does not reduce safety at the Wilshire/Rodeo Station.

FINANCIAL IMPACT

Metro has been contributing to support the design and construction of the North Portal through two project numbers: the PLE2 project #865522, which pays for the scope of work inside the Wilshire/Rodeo Station footprint that is needed to access the North Portal, and the Beverly Hills North Portal (BHNP) project #860522 which pays for Metro's scope of work to review design and coordinate construction outside of the station footprint (work designed and constructed by City) to ensure compliance with Metro Standards and expedite cooperation with PLE2. As of October 2024, the PLE2 project #865522 has expended approximately \$2,101,327, and the BHNP project #860522 has expended approximately \$48,069. The PLE2 project #865522 has committed to spend \$8,733,654 for current and remaining construction within the Wilshire/Rodeo Station footprint. No further expenditures are expected for BHNP project #860522 as the City has discontinued the BHNP. This recommendation will close the BHNP project #860522 and unencumber the unspent amount of \$29,201,931 from the \$29.25M LOP North Portal budget established in May 2022.

Impact to Budget

This recommendation will close the North Portal project #860522 and the unused funds will remain in Measure R 35% Transit to cover costs incurred on Purple Line Extension projects, including financing charges.

EQUITY PLATFORM

The purpose of the North Portal was to meet the requirements of the Settlement Agreement with the City of Beverly Hills, which is not an Equity Focus Community.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

The North Portal is recommended for closure and there is no implementation of strategic plan goals.

ALTERNATIVES CONSIDERED

The Board may choose to continue advancing the North Portal. This is not recommended as the City has decided to discontinue the North Portal and continued advancement of the North Portal would require Metro to provide funding beyond the current LOP budget for the increased North Portal project cost, which may continue to rise.

NEXT STEPS

Upon Board approval of the recommendation, staff will work with the City to reconcile expenditures made by each party per the terms of the Settlement Agreement and close out the North Portal.

ATTACHMENTS

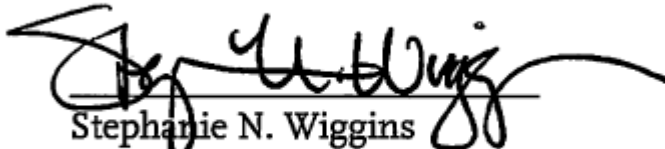
Attachment A - City of Beverly Hills Agenda Report Dated May 7, 2024
Presentation

Prepared by:

Zephaniah Varley, Executive Officer, Projects Engineering, (424) 551-4449

Reviewed by:

Timothy Lindholm, Chief Program Management Officer, (213) 922-7449



Stephanie N. Wiggins
Chief Executive Officer



AGENDA REPORT

Meeting Date: May 7, 2024

Item Number: G-1

To: Honorable Mayor & City Council

From: Daren Grilley, Assistant Director of Public Works/City Engineer
Samer Elayyan, Engineering Services Manager
Christine Chung, Project Manager

Subject: METRO PURPLE (D) LINE EXTENSION NORTH PORTAL PROJECT

Attachments:

1. Settlement Agreement
2. North Portal Project Cost Estimates
3. City and Metro Project Cost Summary

RECOMMENDATION

Staff recommends City Council discontinue the North Portal Project, meet and confer with the Los Angeles County Metropolitan Transportation Authority (Metro) as required in the Settlement Agreement between the City and Metro, and return to City Council for further consideration if Metro decides to pursue the project and fund the project budget overage.

INTRODUCTION

On May 10, 2022, City Council approved an agreement with HDR Engineering, Inc. (HDR) for the design of a second entrance/exit to the Wilshire/Rodeo Metro Purple Line Station on the north side of Wilshire Boulevard (North Portal). The design started in June 2022, and in early 2023, HDR submitted a preliminary design report that included the basis of design and a preliminary construction cost estimate. The cost estimate is significantly higher than the conceptual estimate that was incorporated into the cost sharing agreement with Metro.

DISCUSSION

On November 10, 2020, City Council entered into a settlement agreement with Metro and agreed that (1) Metro and/or the City will construct a station portal on the north side of Wilshire Boulevard, also known as the "North Portal," at a location approved by City

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Council, and (2) Metro will contribute 50% of the total cost of designing and constructing the portal. The agreed upon North Portal project cost (includes design, construction, and construction support and management services) is \$78,500,000, with each party sharing in half of the cost at \$39,250,000. Additionally, City Council certified that the Final North Portal EIR had been completed in compliance with the California Environmental Quality Act, adopted the Findings of Fact and Statement of Overriding Considerations and selected Beverly Drive as the location of the North Portal.

Subsequently, City staff released a request for proposals (RFP) for design of the North Portal in September 2021, and selected HDR based on the firm's qualifications, and the design agreement was approved at the May 10, 2022, City Council Formal Session. HDR started the design in June 2022 and performed a site survey that included the basement of adjacent buildings and submitted the preliminary design (15% design) report. In late January 2023, City and Metro staff reviewed the report and held a workshop with HDR in early February 2023 to discuss the design approach and the cost estimate. City staff requested more information from HDR regarding the cost estimate, and the additional information was submitted to staff early March 2023.

The design report summarized the design approach, constraints, and assumptions that would be considered during the design and construction. The report also provided a preliminary cost estimate that conforms to the requirement of the Association for the Advancement of Cost Engineering (AACE) Class 4 estimate, which is expected to be accurate within a range of -30% to +50%. This class and range are usually used for a design that has been developed less than 15%, where there are still unknown constraints and risks.

The table below summarizes the cumulative estimated project cost:

Scope of Work	Preliminary Cost Estimate
Construction	\$110.2M (including 40% contingency)
Design	\$9.0M
Design Support During Construction	\$5.0M
Construction Management	\$8.8M
Other Support Costs	\$1.2M
Total Estimated Project Cost	\$134.2M*

* The estimated project cost could range from \$94M to \$201M based on AACE Class 4 range of -30% to +50%.

The total estimated project cost (\$134.2M) based on the 15% preliminary design report is significantly higher than the initial conceptual cost estimate (\$78.5M) that was agreed upon in the settlement agreement. The initial conceptual cost estimate at the time of the settlement agreement was based on the project concept, prior to initiating the actual design. Conceptual level cost estimates (or Class 5 estimates, per AACE) have an expected accuracy range of -50% to +100% (i.e., \$39.3M to \$157M). Therefore, the current cost estimate is near the high end of that range (+70%).

Several factors have contributed to the increase in construction costs over the past four years, including a surge in demand for construction materials, increased prices due to more construction projects worldwide, ongoing supply chain challenges from the global pandemic, and rising labor and transportation costs. The cost of labor has also increased due to the demand for skilled construction workers, particularly in high-growth

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regions, and the increases continue to show in the recent bids for various City Capital Improvement Projects.

Depending on Metro's position on the increased construction cost estimate, the City's costs towards the North Portal project could range from \$67.1M (50% of the current estimated project cost) to \$94.95M (if Metro opts to contribute only the originally agreed-upon \$39.25M). On March 27, 2023, City staff met with the Metro Ad-Hoc Committee (previously Mayor Friedman and former Councilmember Bosse) to discuss the North Portal design status and anticipated higher costs. The former Metro Ad-Hoc Committee directed staff to inform stakeholders about the project status and present the matter for City Council discussion at a future City Council meeting.

Community Engagement

City staff initiated community outreach regarding the North Portal project status in May and June 2023. Community outreach included:

- Individual virtual meetings with stakeholders located along Wilshire Boulevard between El Camino Drive and Crescent Drive were held between May 24th and June 1st, 2023. Some of the stakeholders include the Beverly Wilshire Hotel, 9465 Wilshire (Chase Building), Maybourne Beverly Hills, 9401 Wilshire, Spago, AKA, Sixty Hotel, and East West Bank. In addition, staff met with EIR commented stakeholders (property owners, former Technology Committee Advisory), Beverly Hills Conference & Visitors Bureau (CVB), Beverly Hills Chamber of Commerce, and Rodeo Drive Committee (RDC) representatives.
- Staff informed the Southwest Beverly Hills Homeowners Association on May 31, 2023.
- Staff presented regarding the project status at following public meetings throughout June 2023.
 - Metro's monthly community meeting on June 7, 2023
 - Rodeo Drive Committee monthly meeting on June 7, 2023
 - Beverly Hills Chamber of Commerce monthly key stakeholder meeting on June 14, 2023
 - Small Business Task Force Committee Liaison meeting on June 21, 2023
 - Property Owners Task Force Committee Liaison meeting on June 22, 2023
- In addition, Staff notified the stakeholders that they previously met with in 2023 about the City Council meeting scheduled on May 7, 2024.

During the 2023 meetings, the majority of stakeholders expressed concerns about the City potentially funding excessive project costs for a half-portal construction, given that there will be a full portal located nearby at the station on Wilshire Boulevard and Reeves Avenue. There were also suggestions to consider alternative, affordable means to improve mobility across Wilshire Boulevard from the main station entrance.

Based on the feedback received from the community and business committees and the significantly higher project cost estimate, staff recommends discontinuing the North Portal Project and meet and confer with Metro per the Settlement Agreement terms. Upon a decision by the Metro Board, staff would return to City Council for further direction in the event that Metro decides to pursue the project and fund the project budget overage. It is unlikely that Metro will contribute additional funds toward the North

Meeting Date: May 7, 2024

Portal project due to cost overruns in the Purple (D Line) Subway Extension – Section 2 project, as discussed at the LA Metro board meeting in July 2023.

FISCAL IMPACT

Per the settlement agreement, each party pays 50% of the North Portal total project cost (\$78.5 million). If costs exceed \$78.5 million, the parties shall meet and confer in good faith to develop strategies to either reduce costs or increase contributions. The table below outlines multiple scenarios regarding the contribution of both parties toward the project based on the total cost of \$134.2 million.

Contribution Party	Contribution per Settlement Agreement	Contribution if both parties agree to share added costs	Contributions if only City pursues	If neither party agrees to pursue
Beverly Hills	\$39.25 million	\$67.10 million	\$94.95 million	50% of project cost incurred to-date \$5,185,000*
Metro	\$39.25 million	\$67.10 million	\$39.25 million	50% of project cost incurred to date \$5,185,000*
Total	\$78.50 million	\$134.20 million	\$134.20 million	Add total incurred to date \$10,370,000*

* This cost is approximate and will be verified with Metro

If City and Metro agree not to pursue the North Portal Project, both parties must evenly share the cost incurred to date per the settlement agreement. The total cost incurred to date by both parties is approximately \$10,370,000 (Attachment 3) and the City would pay Metro approximately \$2,554,000 (the difference between the 50% cost and what the City has expended so far on the EIR and design). Funding for a portion of the City's share is included in the Capital Improvement Project (CIP) No. 00725: Metro Rodeo Station North Portal.

Shana Epstein,
Director of Public Works

Approved By

Attachment 1

SETTLEMENT AGREEMENT

This Settlement Agreement ("**Agreement**") is dated as of November 10, 2020, and is entered into by and between the Los Angeles County Metropolitan Transportation Authority ("**Metro**") and the City of Beverly Hills (the "**City**"). Metro and the City are individually referred to herein as a "Party" and collectively as the "Parties."

RECITALS

A. Metro and the Federal Transit Administration ("**FTA**") prepared a joint Environmental Impact Statement ("**EIS**")/Environmental Impact Report ("**EIR**") for the Westside Subway Extension, Section 2 ("**Project**") pursuant to the National Environmental Policy Act ("**NEPA**") (42 U.S.C. § 4321 *et seq.*) and the California Environmental Quality Act ("**CEQA**") (Cal. Pub. Resources Code, § 21000 *et seq.*).

B. On November 27, 2017, following a federal court ruling in a legal challenge of the EIS/EIR by the City and the Beverly Hills Unified School District, FTA released a Final Supplemental EIS ("**FSEIS**") and Supplemental Record of Decision ("**ROD**") for the Project. Metro was not a party to the federal actions challenging the EIS/EIR, which are no longer pending in federal court.

C. The Project is a heavy rail transit subway that will extend the existing Metro Purple Line subway from Wilshire/La Cienega to Century City. The Project's alignment is roughly 2.7 miles in length and will be entirely underground, mostly beneath Wilshire Boulevard. Two new stations will be constructed at approximately one-mile intervals, serving major activity and employment centers in Beverly Hills and Century City. The Project's Wilshire/Rodeo Station ("**Station**"), located under and adjacent to Wilshire Boulevard and generally bounded by Beverly Drive on the west and S. Canon Drive on the east, is the only station located within the City. Metro's Design-Build Contractor for the Project is Tutor Perini/O&G ("**Project Contractor**").

D. FTA, Metro, and the City are currently involved in one lawsuit pending before the Federal District Court in Los Angeles County: *City of Beverly Hills v. Federal Transit Administration, et al.*, Case No. CV-18-03891 GW (SSx) ("**Federal Action**"). In the Federal Action the City alleges that the FSEIS inadequately addresses the federal court ruling.

E. Despite the Federal Action, Metro and the City are otherwise cooperating to ensure timely completion of the Project. To that end, on February 19, 2019, Metro and the City entered into that certain Memorandum of Agreement for Contract C1120 of the Purple Line Extension Project – Section 2 between the City of Beverly Hills and the Los Angeles County Metropolitan Transportation Authority, City Agreement No. 71-19 ("**MOA**"), which sets forth the respective rights and responsibilities of the Parties in order to facilitate Project construction in a manner that protects City businesses and residents.

F. The City Council approved the MOA based in part on the Parties' commitment in the MOA to bargain in good faith regarding representations provided by Metro's Chief Executive Officer to jointly fund with the City the construction of a second Station portal on the north side of Wilshire Boulevard at a location approved by the City Council ("**North Portal**"), with Metro

contributing fifty (50) percent of the total cost of designing and constructing the North Portal; and (2) Metro would cause to be constructed and then make available public restrooms to serve Station customers.

G. By this Agreement, Metro desires to satisfy the representations it made to the City Council. To that end, this Agreement sets forth the respective rights, responsibilities, and funding obligations for the joint development of a supplemental Station portal and restrooms to serve the Wilshire/Rodeo Station, as well as funding for emergency rescue equipment for the City's Fire Department to use in the event of a tunnel emergency. In exchange, the City desires to dismiss the Federal Action and to forgo all potential legal challenges to the FSEIS and ROD.

H. On the terms set forth herein, the Parties desire to fully settle and resolve their respective rights, liabilities, obligations and all controversies arising from and related to the State Action and Federal Action as against each other.

NOW, THEREFORE, in consideration of the foregoing and the mutual covenants set forth below, and further good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties do hereby agree, as follows:

1. **Dismissal of Litigation.** The Federal Action shall be dismissed in accordance with the following procedure:

1.1 Within five (5) business days of the Effective Date, the City shall file with the Federal District Court a Request for Dismissal with Prejudice of the Federal Action. Within five (5) business days of receiving a conformed copy of the request for dismissal form showing that the Court Clerk has entered the dismissal, the City shall provide Metro's counsel with a copy of same.

1.2 The City covenants and agrees that it shall not object to, challenge, or be a party to any litigation related to FTA's or Metro's compliance with the requirements of NEPA or CEQA for the Project; provided, however, that nothing in this Agreement shall be construed as limiting, and the City expressly reserves all rights it has to object to, challenge and be a party to any litigation brought against or involving FTA or Metro related to compliance with any mitigation measure adopted pursuant to NEPA or CEQA, any other subject, or to bring a CEQA and/or NEPA challenge to any material change in the Project. Nothing herein shall prohibit or preclude the rights of the City to provide comments on any action taken by the FTA and Metro in connection with any supplemental analysis, or the lack thereof, undertaken by them in furtherance of the Project.

2. **North Portal Development.** The City desires to design and construct a supplemental portal for ingress and egress to the Station on the north side of Wilshire Boulevard, known as the North Portal. At least three alternate, conceptual designs and locations will be analyzed as part of the environmental review process described below. The City Council may approve the final location and design of the North Portal at the conclusion of the environmental review process, or may decline to proceed with construction and development of the North Portal. At a minimum, the North Portal is expected to contain ticket fare gates, stairs, an escalator, elevators, and Fire/Life/Safety improvements. This Agreement sets forth the roles and responsibilities among and between the City and Metro with respect to the North Portal.

2.1 Responsibilities of the City. The following responsibilities are assigned to the City with respect to the North Portal:

2.1.1. Procure one or more environmental consultants, in accordance with applicable contracting laws and regulations, for the preparation of the North Portal's environmental document pursuant to CEQA, including subcontracts for any associated technical studies. To the greatest extent possible, the environmental document will be prepared in a manner that complies with the substantive provisions of NEPA so as to accommodate Metro's procurement role pursuant to Section 2.2.1 if the need arises.

2.1.2. Pursuant to CEQA Guidelines Section 15051(d), serve as the lead agency under CEQA. The City will complete the procedural tasks CEQA assigns to the lead agency, such as filing the notice of completion, submitting documents to the State Clearinghouse and responsible agencies, and serving as the recipient of all comments on the environmental document.

2.1.3. Upon completion of the CEQA process, determine whether or not to authorize construction of the North Portal, and, if so, determine the final location and design of the North Portal substantially based on those locations and designs reviewed in the environmental document.

2.1.4. Upon completion of the CEQA process, procure one or more design contractors for the North Portal (respectively, "**North Portal Design Contractor**") in accordance with applicable contracting laws and regulations, unless the FTA authorizes Metro to issue a change order to the Project Contractor for the design of the North Portal. If the FTA authorizes such a change order, and the Parties mutually agree to the Project Contractor performing the North Portal's design pursuant to a contract change, then Metro shall assume such procurement responsibilities pursuant to Section 2.2.1 below.

2.1.5 Within one hundred and twenty (120) days of the North Portal Design Contractor or the Project Contractor completing a final design for the North Portal, the City shall proceed to solicit bids from qualifying contractors to serve as the "**North Portal Construction Contractor**" in accordance with applicable contracting laws and regulations, unless the FTA authorizes Metro to issue a change order to the Project Contractor for the construction of the North Portal. The lowest, responsible bid received by the City or the final change order price received by Metro, plus a ten percent (10%) contingency, is hereafter referred to as the "**Construction Price.**"

2.1.5. If the Council agrees to proceed with the North Portal, Complete the North Portal in accordance with this Agreement, design and construction contracts, and all other applicable federal, state, and local laws and regulations.

2.1.6. If the Council agrees to proceed with the North Portal, Complete the North Portal in accordance with the MOA, the terms of which shall be incorporated into this Agreement as if set forth in full.

2.2 Responsibilities of Metro. The following responsibilities are assigned to Metro with respect to the North Portal:

2.2.1. If the FTA authorizes Metro to issue a change order to the Project Contractor, and the Parties mutually agree to the Project Contractor performing the North Portal's design and construction pursuant to a change order, then issue the change order for the design and construction of the North Portal to the Project Contractor after the Parties have complied with CEQA and NEPA.

2.2.2. Serve as a responsible agency under CEQA and complete the procedural tasks CEQA assigns to responsible agencies.

2.2.3. If Metro issues the change order pursuant to Section 2.2.1, then comply with any remaining substantive requirements necessary for the environmental document to comply with NEPA and coordinate with the FTA to complete all procedural tasks NEPA assigns to a lead agency and project sponsor, respectively.

2.2.4. Assist the City with construction management, including oversight of the design and construction contractors, preparation and monitoring of construction schedules and milestones, and ensure that all standards and requirements of this Agreement, design and construction contracts, and applicable City and Metro standards are met.

2.2.5. If Metro issues the change order pursuant to Section 2.2.1, complete the North Portal in accordance with this Agreement, design and construction contracts, and all other applicable federal, state, and local laws and regulations.

2.2.6. If Metro issues the change order pursuant to Section 2.2.1, complete the North Portal in accordance with the MOA, the terms of which shall be incorporated into this Agreement as if set forth in full.

2.2.7. If the Parties agree, provide staff, consultants, and contractors deemed necessary and appropriate to manage, administer, coordinate, and oversee engineering, design, and construction management of the North Portal.

2.2.8. Cause the Project Contractor to design and construct all necessary changes to the interior Station walls and platform to accommodate the North Portal, the cost of which will be shared by the Parties in accordance with Sections 2.4 through 2.6.

2.2.9. Establish, jointly control with the City, and distribute funds from the joint account where the Parties will deposit project-related funds pursuant to Sections 2.4 through 2.6 ("**Project Account**").

2.3 **Joint Responsibilities of Metro and the City.** The City and Metro agree to cooperate on the following responsibilities:

2.3.1. The City shall be the lead agency and oversee the preparation of the environmental document. At the City's request Metro may provide responses to comments on the Draft EIR, the Final EIR, and the mitigation monitoring and reporting program. Prior to finalizing the following items, if necessary, appropriate representatives of both Parties shall confer on the following items, prior to the City's approval, in order to ensure consistency and facilitate accurate analysis of the North Portal project:

- Project description;
- Draft EIR and any technical studies and appendices;
- Proposed mitigation measures;
- Proposed project alternatives, including a “no project” alternative;
- Proposed responses to comments; and
- Mitigation monitoring and reporting program.

As the lead agency, the City’s decision to approve or deny the North Portal, and the City’s determinations pursuant to CEQA, must reflect the lead agency’s independent judgment. Accordingly, in the event that the Parties cannot reach an agreement as to the items listed above, final responsibility and authority to approve such items and resolve all other questions concerning the content and quality of the environmental review of the North Portal lies in the City’s sole discretion.

2.3.2. Share and exchange design and construction documents as appropriate and necessary to facilitate the North Portal.

2.3.3. Mutually agree upon any material variance from the approved North Portal design and location.

2.4 Life of Project Budget. The Parties agree that the total gross estimated cost for completing the North Portal and opening the North Portal for customer service, plus a sufficient contingency, is Seventy-Eight Million Five Hundred Thousand Dollars (\$78,500,000) (“Life of Project Budget”). The Life of Project Budget is based on the following anticipated costs: environmental review, design, construction management, construction of the North Portal and related improvements, post-construction costs that may arise to address punch list items or defects, and any other necessary and appropriate costs to complete and open the North Portal for customer service (collectively, “Project Costs”). The Project Costs include the Parties’ respective labor costs, based on each Party’s labor cost standards including overhead, administrative costs, consultant and contractor costs, and costs of purchasing equipment and/or materials without markup of any kind. The Life of Project Budget also assumes inflationary cost escalations for each such item.

2.4.1. Unless the Parties agree otherwise, each Party shall contribute, and deposit into the Project Account, an amount equal to half of the Life of Project Budget in accordance with the schedule and terms set forth in Section 2.5 for the purpose of paying for the North Portal project.

2.4.2. If at any time a joint financial obligation of the Parties relating to the North Portal would cause the Parties to exceed the Life of Project Budget, such that the Project Account’s balance is insufficient to pay for the joint financial obligation, then the Parties shall meet and confer in good faith to develop strategies to either reduce costs or to contribute additional

funds to cover the budget shortfall. Neither Party shall act arbitrarily or capriciously in regard to their decision whether to contribute additional funds.

2.4.3. If the meet and confer process described in Section 2.4.2 does not result in sufficient cost savings or additional funds to cover the budget shortfall, then the Parties shall determine whether they still desire to complete the North Portal and make financial contributions toward the North Portal as follows:

2.4.3.1. If both Parties agree to pursue the North Portal, then each Party shall deposit equal amounts into the Project Account so that the Project Account's balance is sufficient to pay all pending and anticipated joint financial obligations of the Parties relating to the North Portal.

2.4.3.2. If the City determines to pursue the North Portal, but Metro does not, then Metro shall deposit the remaining portion of its half share of the Life of Project Budget, if any, into the Project Account and shall have no further funding obligations toward the North Portal.

2.4.3.3. If Metro determines to pursue the North Portal, but the City does not, then the City shall deposit the remaining portion of its half share of the Life of Project Budget, if any, into the Project Account and shall have no further funding obligations toward the North Portal.

2.4.3.4. If Neither Party agrees to pursue the North Portal, then neither Party shall have further funding obligations toward the North Portal and remaining funds in the Project Account shall be used to pay any remaining joint financial obligations and then returned to the Parties in accordance with Section 2.6.6.

2.5 Schedule of Deposits into the Project Account. Subject to the terms and limitations of the Life of Project Budget, the Parties shall contribute funds to the Project Account in accordance with the following terms:

2.5.1. Construction Contract Funding. Within thirty (30) days following the award of the Construction Contract for the North Portal, each Party shall deposit into the Project Account Ten Million Dollars (\$10,000,000.00) less each Party's approved credits in accordance with Section 2.5.2, but in no event shall each Party deposit less than Three Million Dollars (\$3,000,000.00). Thereafter, whenever the Project Account falls to One Million Dollars (\$1,000,000.00) or a Party receives an invoice for Project Costs in excess of the Project Account's balance, then within ten (10) days each Party shall deposit into the Project Account an additional Five Million Dollars (\$5,000,000.00) but not to exceed the Party's 50% share of the Life of Project Budget. Neither Party shall withhold its contributions to the Project Account for any reason not enumerated in the Agreement and pledge to never delay progress payments from the Project Account to its consultants or contractors.

2.5.2. Deposit Credits. Each Party may receive a credit against all or a portion of the initial deposit required by Section 2.5.1 by directly paying, or committing by contract to pay, a consultant or contractor retained by that Party for necessary services to environmentally review, design, or construct the North Portal. A Party wishing to obtain a credit pursuant to this

Section shall provide the other Party with an executed contract or contract modification specifying the amount to be paid for the services or an invoice indicating the services rendered and amounts paid by the Party for such services at least thirty (30) days prior to the deadline for making the initial deposit. If a contract or contract modification is provided, then a subsequent invoice for such contracted services shall be provided to the other Party within six (6) months of the deposit's due date; provided, however, that invoices may be provided every sixty (60) days thereafter if the services necessarily require more than six (6) months to complete. If an invoice is not provided in accordance with this schedule, then the unsatisfied portion of the credit shall be revoked and the remainder of the deposit will become immediately due and payable. The other Party shall approve the contract or invoice and associated credit, which approval shall not be unreasonably withheld.

2.6 Manner In Which Each Party Will Be Reimbursed For Costs.

2.6.1. The Parties shall be entitled to reimbursement from the Project Account for their respective Project Costs.

2.6.2. Metro will establish the joint Project Account at a reputable banking institution that is reasonably acceptable to both Parties (the "**Bank**"). The Parties shall be jointly responsible for the cost of any administrative or service fees charged by the Bank. The Joint Account shall be accessible to both Parties for reimbursements in accordance with the procedures described in this Section 2.6. The Bank will remit a reimbursement payment within thirty (30) days of receipt of an invoice fully executed by both Parties authorizing reimbursement for Project Costs.

2.6.3. Either Party may submit duly executed invoices to the Bank for reimbursement of Project Costs. Prior to doing so, the Party seeking reimbursement shall provide the other Party an invoice outlining the Project Costs to be reimbursed, along with a certification that the charges identified in such invoice qualify as Project Costs, were appropriate and necessary for completion of the North Portal, and had not previously been billed or paid. With respect to all undisputed amounts, within thirty (30) days from receipt of the invoice, an authorized representative of the Party not seeking reimbursement shall approve the invoice by duly executing the official copy. The Parties shall attempt to resolve any disputed amounts within sixty (60) days of receipt of the invoice, by which time the Party seeking reimbursement shall either remove or reduce the costs or the other Party's representative shall approve the invoice for reimbursement.

2.6.4. Within fifteen (15) days after each month-end, Metro shall provide the Parties with a monthly project accounting report detailing Project Costs and expenditures, remaining Life of Project Budget authority, and any anticipated budget shortfall. Either Party may request of the other Party copies of billing statements, invoices and other financial documents relating to the North Portal.

2.6.5. Funds deposited into the Project Account may only be used for Project Costs incurred in furtherance of the environmental review, design, and construction of the North Portal. All interest accruing to funds in the Project Account shall remain in the Project Account.

2.6.6. Once all invoices submitted by the Parties have been paid out of the Project Account and all other obligations relating to the North Portal are satisfied, any remaining funds in the Project Account shall be returned to the Parties in proportion to each Party's respective contribution of funds to the North Portal project. Notwithstanding the foregoing, if the Life of Project Budget is exceeded and one Party chooses to fund the remainder of the Project Costs, while the other does not, then the Party contributing the remainder of the Project Costs shall be entitled to receive all remaining funds in the Project Account upon final completion of the North Portal and acceptance by Metro into its system for customer service.

2.6.7. Any disputes regarding billing statements, invoices, or reimbursements to or from the Project Account shall be resolved pursuant to Section 7 of this Agreement.

2.7 North Portal Acceptance. The North Portal shall become part of Metro's system upon its completion and acceptance of the work by the Parties. At that time, Metro shall assume all obligations associated with the maintenance, repair, and operation of the North Portal to the same extent as any other portion of the Station and its appendages.

2.8 Station Opening. The North Portal shall not be closed, and shall be available for customer use, at all times that the Station is open for customer use for at least twenty-five (25) years beginning on the date that the North Portal is first opened for customer use, except for routine maintenance, repairs, cases of emergency, threats to public health or safety, or if necessary for construction of a joint development involving Metro, the City and/or a private developer.

3. Public Restrooms. The City and Metro jointly agree that public restrooms shall be made available for customer use. The Parties will bargain in good faith regarding the availability of public restrooms when the Station opens for public use, consistent with a Metro systemwide restroom policy to be adopted by the Metro Board of Directors. The City Council has approved this Agreement in good faith reliance on Metro's representation that public restrooms will be available for customer use when the Station opens, pursuant to a Board-adopted systemwide restroom policy. If public restrooms are not provided pursuant to a systemwide restroom policy, then Permanent public restrooms will be constructed and made available in connection with a future development that benefits from the Station's existence. Metro shall be solely responsible for the full cost of constructing and maintaining the restrooms, provided that it may cause a private party to construct or maintain the restrooms if the restrooms are included in a future development at the Station. Alternatively, the City may include the restrooms in connection with a future development located at 9393 and/or 9385 Wilshire Boulevard, in which case Metro will not be responsible for the cost of constructing and maintaining the restrooms.

3.1 Restroom Maintenance. The public restrooms provided by this Section 3 shall be fully plumbed in accordance with applicable technical codes, be designed and sited to match the context of the surrounding buildings and environment, and maintained in a manner and frequency to ensure they are clean and sanitary. Metro shall coordinate with the City on the final design of any permanent restrooms constructed on Station property pursuant to this Section 3. Metro shall be responsible for maintaining the bathrooms at its sole cost, unless the restrooms are incorporated into a development project at 9393 and/or 9385 Wilshire Boulevard. Restrooms may

be periodically unavailable for public use due to routine maintenance, repairs, cases of emergency, threats to public health or safety. The obligation in this Agreement to provide public restrooms expires twenty-five (25) years from the date that the Station is first opened for customer use.

4. **Rescue Equipment.** Metro shall reimburse the City for the cost of rescue equipment for use in the event of a tunnel emergency during construction or operation purchased for the City's Fire Department up to Two Hundred Fifty Thousand Dollars (\$250,000.00). Metro shall remit funds within thirty (30) days of receipt of the City's invoice for the equipment.

5. **Holiday Moratorium.** Notwithstanding the provisions in the MOA, Article XIII prohibiting work during a holiday moratorium without City Council approval, Metro shall be permitted to work during the 2020 holiday moratorium in accordance with the conditions set forth in Exhibit A, in order to complete the Project and the C1120 Contract in a timely manner. Notwithstanding the provisions of this Agreement and in accordance with the MOA, Metro, at its discretion, may request an exemption from holiday moratoria after 2020. The Parties will bargain in good faith regarding an exemption from the 2021 or 2022 holiday moratorium with City Council approval. Metro has approved this Agreement in good faith reliance on the City's representation that it will accommodate Metro's request to work during the 2021 or 2022 holiday moratorium, if reasonable.

6. **Station Excavation.** Notwithstanding the required construction lane configurations and work hours set forth in Articles XII and XIII of the MOA, respectively, the City herein authorizes Metro, pursuant to this Section 6, to excavate the Station box through the Station property at Wilshire/Reeves and through the deck panels installed over Wilshire Boulevard in accordance with the conditions set forth in Exhibit A and the terms below.

6.1 **Sound Wall Across S. Reeves Drive.** Metro may temporarily close S. Reeves Drive at Wilshire Boulevard to vehicular traffic solely during the excavation of the Station box, provided that a sound wall is erected across S. Reeves Drive north of the Sirtaj Hotel. This sound wall shall have a wall assembly of STC-25 or greater, and the ability to reduce noise by at least 5 dBA. Public information graphics acceptable in design to the City shall be placed on the south side of the wall. Unless approved by the City Council, the sound wall shall be promptly removed and S. Reeves Drive reopened to vehicular traffic when excavation of the Station box is complete and the 20 foot sound wall around the Reeves Staging Yard shall be reestablished. The City Council may approve further closures of S. Reeves Drive upon request by Metro.

6.2 **Compliance With Noise Standards.** Pursuant to Article XIV of the MOA, the City Council authorizes Metro to excavate the Station box at night as set forth in Exhibit A based on the noise study prepared by the Project Contractor and reviewed by Metro that concludes that the nighttime construction work can be conducted in compliance with the noise standards set forth in Article XIV of the MOA. The noise study and associated mitigation measures are incorporated herein and attached hereto as Exhibit B. If the Independent Compliance Monitor established under Article XVI of the MOA identifies an exceedance of such a noise standard, then Metro and the Project Contractor shall promptly discontinue the construction activity that caused the exceedance until additional mitigation measures, possibly including reduction of construction activities, are implemented to reduce noise levels below the applicable noise standard.

6.3 **Compliance with MOA.** Except as provided herein, all other provisions of the MOA remain in effect, including the noise standards set forth in Article XIV and remedies available to the City to enforce those standards.

7. **Dispute Resolution.** If a dispute, claim, disagreement or controversy (a "**Dispute**") arises in connection with this Agreement or the performance of obligations set forth herein, the Parties shall promptly attempt in good faith to resolve such Dispute by negotiation between officers of each Party who have authority to settle the controversy. Either Party may give the other Party written notice of any Dispute not resolved in the normal course of business. Within five (5) business days after delivery of the notice, the receiving Party shall submit to the other Party a written response. The notice and response shall include with reasonable particularity a statement of each Party's position and a summary of its reasons supporting that position. Within five (5) business days after delivery of the response, the officers of both Parties shall meet at a mutually acceptable time and place. Unless otherwise agreed in writing by the negotiating Parties, the above-described negotiation shall end at the close of the first meeting of officers described above ("**First Meeting**"). If the Parties agree to mediate the Dispute, such mediation shall be submitted to JAMS, or its successor, for mediation. After the First Meeting and, if applicable any mediation agreed to by the Parties, either Party may seek judicial relief in Los Angeles Superior Court.

Additionally, if either party believes that there is a threat to public health or safety, that party may immediately seek judicial relief in the Los Angeles Superior Court.

8. **Duty to Cooperate.** The Parties agree to engage constructively, actively and on an ongoing basis to maximize the effectiveness of the Project. This duty shall include the sharing of non-confidential information upon request.

9. **Joint Press Release.** Upon final execution of this Agreement, the Parties shall jointly release to the public the following written statement:

"The Los Angeles County Metropolitan Transportation Authority (Metro) and the City of Beverly Hills announced an agreement today that avoids further litigation by the City concerning the Purple Line subway extension to Century City. The Beverly Hills Unified School District is not a party to this settlement agreement.

The agreement calls for the joint development of a second portal to serve the Wilshire/Rodeo Station. This second portal will serve businesses and tourists who regularly travel to the City's business triangle. The settlement agreement also calls for public restrooms to serve Station customers.

"We are pleased with this agreement," said Metro Board Chair and Los Angeles Mayor Eric Garcetti. "It keeps this critically important project on track. We look forward to delivering it to the commuters and taxpayers of Los Angeles County in a timely manner."

"We are glad to be able to move forward as a partner with Metro in developing the region's mobility solutions and welcoming the subway to our city," said Beverly Hills Mayor Lester Friedman.

“Having secured federal matching funds to complete the Purple Line Extension, Metro is excited to bring rapid rail service to Westwood in time for the 2028 Summer Olympics,” said Phillip Washington, Metro’s CEO.

The Purple Line Extension will extend the subway from its current terminus at Wilshire Boulevard and Western Avenue to Westwood to be built in three phases. The first segment to Wilshire and La Cienega Boulevard and the second segment through downtown Beverly Hills to Century City are both under construction. The third segment travels to Westwood and ends at the VA Hospital. When complete, the subway will provide a 25-minute ride between downtown Los Angeles and Westwood.”

10. **Indemnity**. Each Party agrees to defend, indemnify and hold harmless the other Party, their officers, agents, elected officials and employees from all liability, claims, losses and demands, including defense costs and reasonable attorneys’ fees, whether resulting from court action or otherwise, arising out of the negligent acts or omissions of the defending Party, its officers, agents, or employees, in the performance of this Agreement. When negligent acts or omissions of one Party are specifically directed by another Party, the Party directing the negligent acts or omissions shall owe this defense and indemnity obligation to the Party following the directions. This clause shall not be construed to supersede or affect the Parties’ indemnity obligations to each other, as set forth in the MOA, with respect to any other aspect of the Project not specifically addressed in this Agreement. The provisions of this paragraph shall survive the termination of this Agreement.

11. **Priority of Agreements**. The following order of priority shall control in the event of a conflict between the provisions of these documents: (1) the body of this Agreement; (2) Exhibit A; (3) Exhibit B; and (4) the MOA.

12. **Effective Date**. The “Effective Date” shall be the date that this Agreement is fully executed.

13. **Further Assurances**. The Parties agree to enter into, deliver, perform, construe, and take any action under any contract, agreement, or other instrument that is reasonably necessary to effectuate this Agreement, and, except as otherwise provided in this Agreement, the City Manager and Chief Executive Officer shall have the authority to do so on behalf of the City and Metro, respectively.

14. **Parties’ Remedies**. Each Party expressly agrees that damages are an inadequate remedy for a breach of this Agreement and that all provisions of this Agreement shall be specifically enforceable by either affected party.

15. **Entire Agreement**. This Agreement, together with any exhibits attached hereto, contains the sole and entire agreement and understanding to which the Parties and any and all prior discussions, negotiations, commitments or understandings related hereto, if any, are merged herein and superseded hereby. No representations, warranties, promises, covenants, undertakings, commitments, restrictions, or other obligations, verbal, written or otherwise, expressed or implied, other than those expressly contained herein have been made by either Party to the other.

16. **Amendments; Waiver.** This Agreement may be amended only by an agreement in writing signed by both Parties hereto. No waiver of any provision or consent to any exception to the terms of this Agreement shall be effective unless in writing and signed by the Party to be bound, and then only for the specific purpose, extent, and instance so provided. Failure on the part of any Party to enforce any of its rights under this Agreement shall not be construed as a waiver of such rights, and a waiver by any Party of a default hereunder in any instance shall not be construed as constituting a continuing waiver or as a waiver in other instances.

17. **No Release.** Nothing set forth in this Agreement shall constitute a waiver or release of claims by either Party for compensation and/or damages arising from the Project.

18. **Notices.** Any notice, demand, or other communication of any kind, whatsoever, that any of the Parties may be required or may desire to give to or serve upon any of the other Parties shall be given in writing and (i) delivered in person (including express or courier service), or (ii) mailed by certified or registered mail, postage prepaid, return receipt requested, addressed as follows:

If to Metro:

Los Angeles County Metropolitan Transportation Authority
One Gateway Plaza
Mail Stop: 99-17-20
Los Angeles, California 90012
Attention: Richard Clarke

With a copy to:

Los Angeles County Metropolitan Transportation Authority
County Counsel
Transportation Division
One Gateway Plaza
Mail Stop: 99-24-20
Los Angeles, California 90012
Attention: Ronald W. Stamm, Esq.

If to the City:

City Manager
Beverly Hills City Hall
455 N. Rexford Dr., 4th Floor
Beverly Hills, CA 90210

With a copy to:

City Attorney
Beverly Hills City Hall
455 N. Rexford Dr., Room 230
Beverly Hills, CA 90210

Richards, Watson & Gershon
350 South Grand Avenue, 37th Floor
Los Angeles, California 90071-3101
Attn: Laurence S. Wiener, Esq.

or to such other address or to such other person as any Party shall have last designated by such notice to the other Party. Each such notice, demand, or other communication, if addressed as aforesaid and delivered in person, shall be effective only when actually delivered to such addressee. Each such notice or communication, if addressed as aforesaid and transmitted via either certified or registered mail, shall be effective upon the date of delivery, whether or not accepted by addressee.

19. **Voluntary Agreement; Representation by Counsel.** This Agreement is executed voluntarily by each of the Parties hereto without any duress or undue influence on the part of, or on behalf of, either of them. The terms of this Agreement have been negotiated by the Parties, and the language of the Agreement shall not be interpreted under presumptions in favor of or against any particular Party. Each of the Parties hereto represents and warrants to each other Party that it has read and fully understands the provisions of this Agreement and has had the opportunity to discuss the same with legal counsel of its own choosing. Each of the Parties hereto further represents and warrants to the other Party that its officers or other representatives who sign this Agreement on its behalf are authorized to do so and to bind that Party, both by consent of that Party and under applicable law, and that they are executing this Agreement pursuant to that authority. The Parties, and each of them, acknowledge that each has been represented in the negotiations for and in the performance of this Agreement by counsel of its own choice; that the Parties have read this Agreement; that the Parties have had this Agreement, and each of its terms, fully explained by such counsel or have had such opportunity; and that each Party is fully aware of the contents of this Agreement and of its legal effect.

20. **Binding Effect.** This Agreement shall bind, and inure to the benefit of, the Parties' respective successors and representatives.

21. **Assignment.** The rights and obligations of Metro under this Agreement shall not be assigned and any attempted assignment shall be void and of no effect. The rights and obligations of the City under this Agreement shall not be assigned and any attempted assignment shall be void and of no effect.

22. **Governing Law.** The validity, interpretation, effect, and enforcement of this Agreement, or any portion thereof, shall be governed by, and shall be construed and enforced in accordance with, the laws of the United States and the State of California, as applicable.

23. **No Third-Party Beneficiaries.** Nothing in this Agreement is or shall be construed to be intended to benefit any third party, or create any third-party beneficiary and no third party or parties shall have any claim or right of action under this Agreement for any cause whatsoever. Notwithstanding the foregoing, FTA is a third-party beneficiary of this Agreement.

24. **Authorization to Sign.** The persons executing this Agreement on behalf of Metro and the City, respectively, each represent and warrant that he or she is duly authorized to execute same on behalf of its Party.

25. **Counterparts.** This Agreement may be executed in one or more counterparts, each of which shall be deemed an original agreement, but all of which together shall constitute one agreement.

26. **Time of Essence.** Time is of the essence of every provision hereof in which time is a factor.

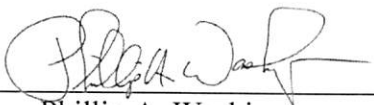
27. **Usage.** Unless stated otherwise, the term “day” or “days” shall refer to calendar days.

[Signature page follows]

IN WITNESS WHEREOF, the Parties have caused this Agreement to be duly executed by their duly authorized representatives as of the Effective Date.

“Metro”


Los Angeles County Metropolitan Transportation Authority

By: 
Name: Phillip A. Washington
Title: Chief Executive Officer

Date: November 19, 2020


“City”

City of Beverly Hills


By: 
Name: LESTER J. FRIEDMAN
Title: Mayor of the City of Beverly Hills, California

Date: December 10, 2020

ATTEST:

 (SEAL)
HUMA AHMED
City Clerk

Approved as to Form:


LAURENCE S. WIENER
City Attorney

Approved as to Form:

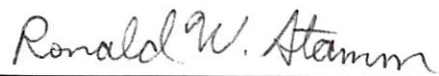

RONALD W. STAMM
Principal Deputy County Counsel

Exhibit A

Conditions of Approval for Excavation Work and Work During 2020 Holiday Moratorium

The following conditions apply until the earlier of June 30, 2021, or when restaurants within the City of Beverly Hills are permitted by applicable public health orders to provide indoor dining at 100% capacity:

Traffic Control

- S. Reeves can be Closed between Wilshire Blvd and the Alley south of Wilshire Blvd.
 - At the completion of excavation of station box, S. Reeves closure to end with complete opening of S. Reeves and 20' minimum sound walls to be reestablished around Reeves Staging Yard w/ Public Information Graphics.
- Wilshire can be configured to two lanes in each direction with K-rail with sound walls (extended Staging Yard)
 - All walls to have Public Information Graphics and/or Holiday Themed Public Information Graphics per City (see Public Information Graphics below). The sound wall protection currently in effect will satisfy this noise requirement.
- Wilshire can be configured to one lane in each direction, allowing for access to deck panels at Beverly and S. Canon
 - 12am to 10:45am. Only traffic control set up may occur between 12am and 1am.
- All other traffic control must meet MOA conditions but at no time shall there be work/traffic control in Wilshire Blvd between 4pm and Midnight. This excludes the extended Reeves Staging Yard traffic control described above.

Work Activities

- Excavation, Material removal and Hauling - Access through Deck Panels on Wilshire
 - Weekdays and Weekends
 - 12am to 10:45am. No surface work activities (i.e. excavation/hauling) to start before 1am. Only traffic control set up to occur between 12am and 1am.
 - Per the MOA, Nighttime noise control plan must be approved by City Council.
- Excavation, Material removal and Hauling – Within Extended Reeves Staging Yard Area (Behind K-rail Setup with Reeves Closed)
 - Weekdays
 - 7am to 4pm and 1am to 7am
 - Per the MOA, Nighttime noise control plan must be approved by City Council for work between 1am and 7am.
 - Weekends
 - 8am to 4pm and 1am to 8am

- Per the MOA, Nighttime noise control plan must be approved by City Council for work between 1am and 8am.
- Material Delivery and Utility Maintenance - Access through Deck Panels on Wilshire
 - Weekdays and Weekends
 - 12am to 10:45am. No surface work activities (i.e. material delivery/utility maintenance) to start before 1am. Only traffic control set up to occur between 12am and 1am.
 - Per the MOA, a noise control plan must be approved by City staff.
- Material Delivery and Utility Maintenance – Within Extended Reeves Staging Yard Area (Behind K-rail Setup with Reeves Closed)
 - Weekdays
 - 7am to 4pm and 1am to 7am
 - Per the MOA, Nighttime noise control plan must be approved by City Staff for work between 1am and 7am.
 - Weekends
 - 8am to 4pm and 1am to 8am
 - Per the MOA, Nighttime noise control plan must be approved by City Staff for work between 1am and 8am.
- Engineering (Survey/Potholing/Geotechnical Borings/Instrumentation & Monitoring) outside the Triangle east of Crescent.
 - 7am to 4pm Weekdays on Wilshire
 - 8am to 4pm Weekdays off Wilshire

Public Information Graphics

- Public Information Graphics and/or Holiday Themed Public Information Graphics must be installed as identified and specifically requested by the City on all fencing and/or walls proposed if feasible.
- Santa Display shall be erected and hung by the City at Beverly Dr. and Wilshire Blvd., as in past years, at a time designated by the City. No work activities shall substantially degrade the existing physical quality or character of the Santa Display until the Santa Display is removed by the City.

Holidays

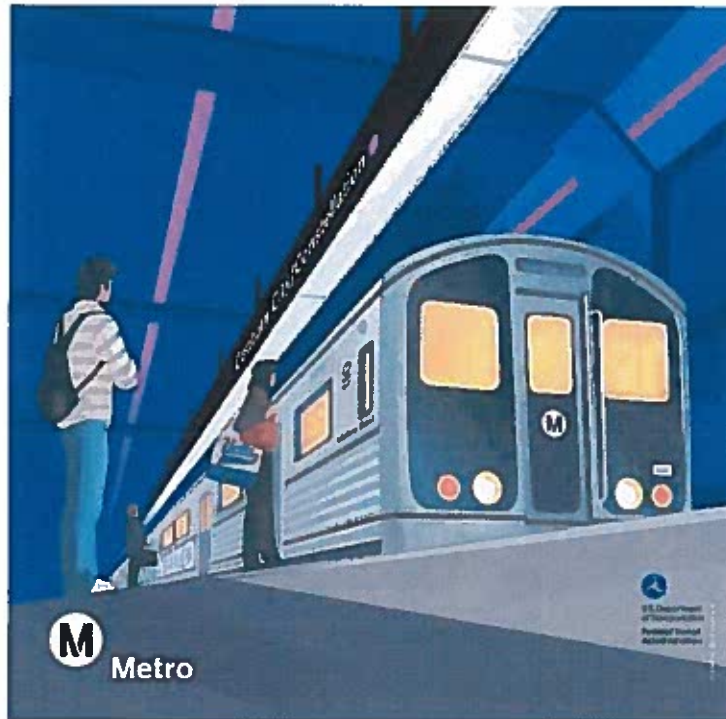
- No work to occur on Thanksgiving, Friday after Thanksgiving, Christmas Eve, Christmas, New Year’s Eve, New Year’s Day, 1st night of Hanukkah (Dec. 10, 2020). Traffic control associated with the Extended Reeves Staging Yard are permitted to remain in place on these holidays during excavation.
- If there is a City Event (i.e. Holiday Bold, Awards Event, etc.), No work can occur during planned City Sponsored Events.

Independent Compliance Monitor

- Compliance would be monitored and enforced by the ICM in accordance with the MOA.

Exhibit B
Approved Noise Study

**MTA PURPLE LINE SECTION 2 PROJECT
NOISE CONTROL PLAN MOA CONDITIONS
Wilshire/Rodeo Station Excavation**



November 3, 2020

Submitted by:



Engineered Solutions

Submitted to:

TUTOR PERINI/O&G, JV

1801 Century Park East, Ste. 500

Los Angeles, CA 90067





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1. Introduction

The aim of this study is to analyze and predict the construction noise levels during excavation through a limited opening and hauling operations at Wilshire Blvd & S. Canon Dr. The excavation site is in front of 9378 Wilshire Blvd. The site is surrounded by high rise office spaces alongside Wilshire Blvd and Canon Drive. The residential buildings are located to the east and south of the excavation site. Commercial structures are located to the south as well as north across Wilshire Blvd.

2. Construction Schedule

The excavation work will commence in 2020.

3. SoundPLAN

The sound model for the excavation was developed for continuous noise generation during the daily work shifts. *SoundPLAN* was configured with settings outlined in Table 1. The noise modelling was performed using *SoundPLAN* version 8.1, which calculates outdoor noise propagation based upon the methodology specified in ISO 9613 -2.

Table 1 *SoundPLAN* Noise Prediction Model Settings

Prediction Model:	ISO 9613 -2 "Acoustics -- Attenuation of sound during propagation outdoors -- Part 2: General method of calculation", 1993
Air absorption:	ISO 9613-1 "Acoustics -- Attenuation of sound during propagation outdoors -- Part 1: Calculation of the absorption of sound by the atmosphere"
Environment:	
Air pressure	1013 mbar
rel. Humidity	70%
Temperature	25 °C = 77 °F
Maximum Screening Loss:	
Assessment:	Leq
Frequency Weighting:	dBA
Ground:	Reflective Ground g=0



Note:

- The accuracy of a noise model depends on several parameters such as source input (sound power level, spectral content, operation consideration), modeling standard settings, and noise prediction parameters.
- The excavation area was modeled using the *SoundPLAN* noise modeling software. The prediction uses the ISO 9613 -2 [Acoustics -- attenuation of sound during propagation outdoors -- Part 2: General Method of Calculation", 1993] prediction standard. *SoundPLAN* follows and meets the requirements developed for quality assurance of software implementation of ISO 9613-2 [ISO 175343 Acoustics -- software for the calculation of sound outdoors -- Part 3: Recommendations for quality assured implementation of ISO 9613-2].
- The ISO 9613-2 standard was developed with slight downwind and inversion condition which typically overpredicts than under-predict the noise levels. The FHWA emission data do also tend to be conservative and overestimate the equipment noise generation.
- Regarding the overall predicted sound level, the model assumes that all equipment operates at the same time, which is a conservative prediction process.
- The equipment sound power level inputs were based on measured data provided by TPOG, Specification 01 56 19 and data published by FHWA - Table 1. Construction Equipment Noise Emission Levels (https://ops.fhwa.dot.gov/wz/workshops/accessible/Schexnayder_paper.htm). The FHWA data typically does not reflect the newest noise control technology and provide a conservative assessment with higher input sound power levels.



4. Noise Control Plan

The noise control plan was developed based on the situation below:

Excavation and Hauling operational for 24 hours/day. Excavation site is surrounded by 12 ft noise barrier with all equipment operating simultaneously. However, for the noise model different utilization factors for the equipment were considered, as shown in the Table 2, below.

Terex RT 780 Crane will be in operation at Wilshire and Beverly Drive within a 12 feet high Noise Barrier.

To account for cumulative noise at sensitive receivers, the ventilation fan installed in the Canon Yard was also added to the noise model. A 14 feet high Noise barrier is added around the Ventilation fan.

If current excavation location is modified or if addition locations are added, Noise Control Plan will be updated accordingly.

The noise control plan will be updated quarterly.

4.1 Construction Equipment

Construction equipment list shown in Table 2 was used for the model development.

Table 2. Sound Power Levels

Name	Lw (dbA)	Noise Levels @ 50 ft (dbA)	Utilization
Dump Trucks (Height 12 ft)	105	75	66%
Haul Route (Height 12ft, Speed 20mph)	105	75	Noise Exposure -10%***
Excavator (Height 8 ft)	109	79	100%
Terex Rough Crane Rt 780 (Height 8 ft)	111	81	95%
Ventilation Fans**(Height 3 ft)	112	82	100%
Ventilation Metal Grate -- Modeled as two separate point sources* (At ground Elev)	89	59	100%

- Note: Noise Levels at 50 ft were provided by TPOG, Equipment are not subjected to requirements beyond specification 01 56 19
- *Noise Power Levels for Metal grate was calculated by using the Noise Measurement Data provided by Metro, Noise Silencer was used to reduce the noise from the intake, see Appendix
- Please refer to Appendix C for Noise Certification, *** Equipment Noise Certification for ventilation fans is attached in Appendix D.
- Note: The sound Power Levels were calculated from the Noise Levels @50 ft as shown in the table below ($L_w = L_{50} + 20 \log(50 \times 0.3048) + 8$)
- ***The Noise Exposure from Haul route is calculated at 20 mph. The trucks are anticipated to pass the sensitive receivers every 5 minutes, adding noise exposure for 30 seconds for each receiver or 90 seconds every 15 mins or 10%.

4.2 Site Plan and Discussions

The Baseline Model for situation is shown Figure 1, it includes all equipment that would be operational during excavation. Noise Sensitive locations as per MOA conditions are shown in Figure 2. The staging area is highlighted in purple.



The 14 high Noise Barrier (NRC=0.85) is indicated as the blue boundary around the excavator and dump truck on the Wilshire Blvd. The Noise Barrier height was increased to a total of 15 feet on east section to shield receptor RD-11 from noise. The loading trucks will enter through the west section of the closure. The Noise wall will remain closed except during the trucks entering the work area and hence, the Noise Wall was modeled as a continuous sound barrier.

Excavator operation inside the closure at Wilshire Blvd was modeled as the area source and Dump Truck was added as a point source. Haul route is added as the line source with trucks travelling at a speed of 20 mph.

Along with the Haul Route, excavator, and dump trucks a ventilation fan was also added in the noise control plan at Canon Yard. A 20ft high noise wall is installed around the Canon Yard, also shown in green in Figure 2. An additional 14 feet high noise wall was modeled around the Ventilation Fan as shown in figure 1. The maximum operational noise value for the ventilation fans shall be 82 dBA at 50 feet per the noise certificate attached in the appendix.

A 100% utilization factor or 24-hour operation was assumed for the Ventilation Fan. The Utilization factors for Excavator was added as 100% to mimic continuous operation for 24h. The average travel speed from 9355 Wilshire Blvd. to 9555 Wilshire Blvd was added to be 20mph. Average time of truck idling was estimated to be 10 min every 15 min; hence, the Utilization Factor is calculated as 66 %.

The noise exposure from the haul route will be around 90 seconds for 15 minutes interval considering 30 seconds exposure during each 5 minutes dump cycle.

Crane operation at Wilshire/Beverly Dr was included was modeled with 12 feet Noise Barrier around the crane and dump truck.

Ventilation intake located at Wilshire/Beverly Dr. was also included in the noise model. The Sound Power Levels for the Ventilation grate were calculated from the noise measurement provided by Metro (see Appendix). The ventilation intake was modeled as two-point source to match the noise profile provided by the measurement results.

The residential buildings are shown in blue on figure 1; hotels are shown as light green; and commercial buildings and residential buildings are shown in shades of grey. The buildings were modeled at their full height; varying floor heights were identified.

To calculate the Noise Levels at different heights, noise receptors were added on all façades of the buildings.



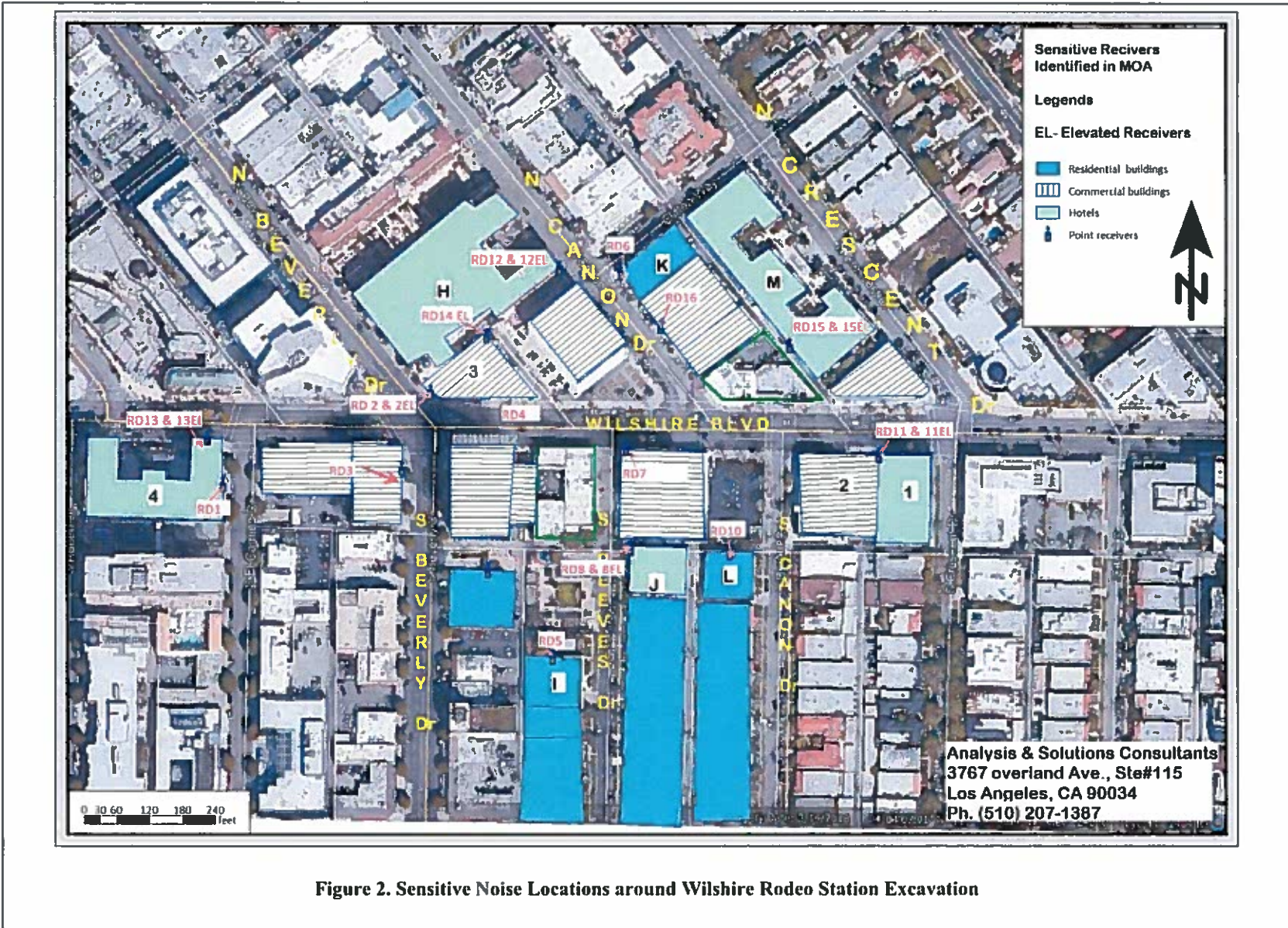


Figure 2. Sensitive Noise Locations around Wilshire Rodeo Station Excavation

4.3 Results and Observations

Noise predictions for 24 h are presented in Appendix B. Threshold limits at the receivers established by Ambient Noise Study (submitted previously) are used for comparing predicted noise levels.

Based on the assessment of the results, RD-2, RD-3, RD-13, RD-10, RD-11 RD-15, and RD-16, receptors will be directly affected by the construction activities. However, the predicted noise levels for these receptors are within the noise level threshold. The noise levels should be closely monitored to avoid any exceedance during the nighttime work hours.

RD-15 – receptor RD 15 is located directly to the east of the Canon Yard Canon Yard. While ground level is properly shielded from the Noise Levels by 20 ft high Noise Barrier, the elevated receptor may be affected by the construction equipment, specially Ventilation Fan and dump trucks. A 14 feet Noise Barrier is also required around the Ventilation Fan. The ideal location for the fan would be around the middle portion of the yard.

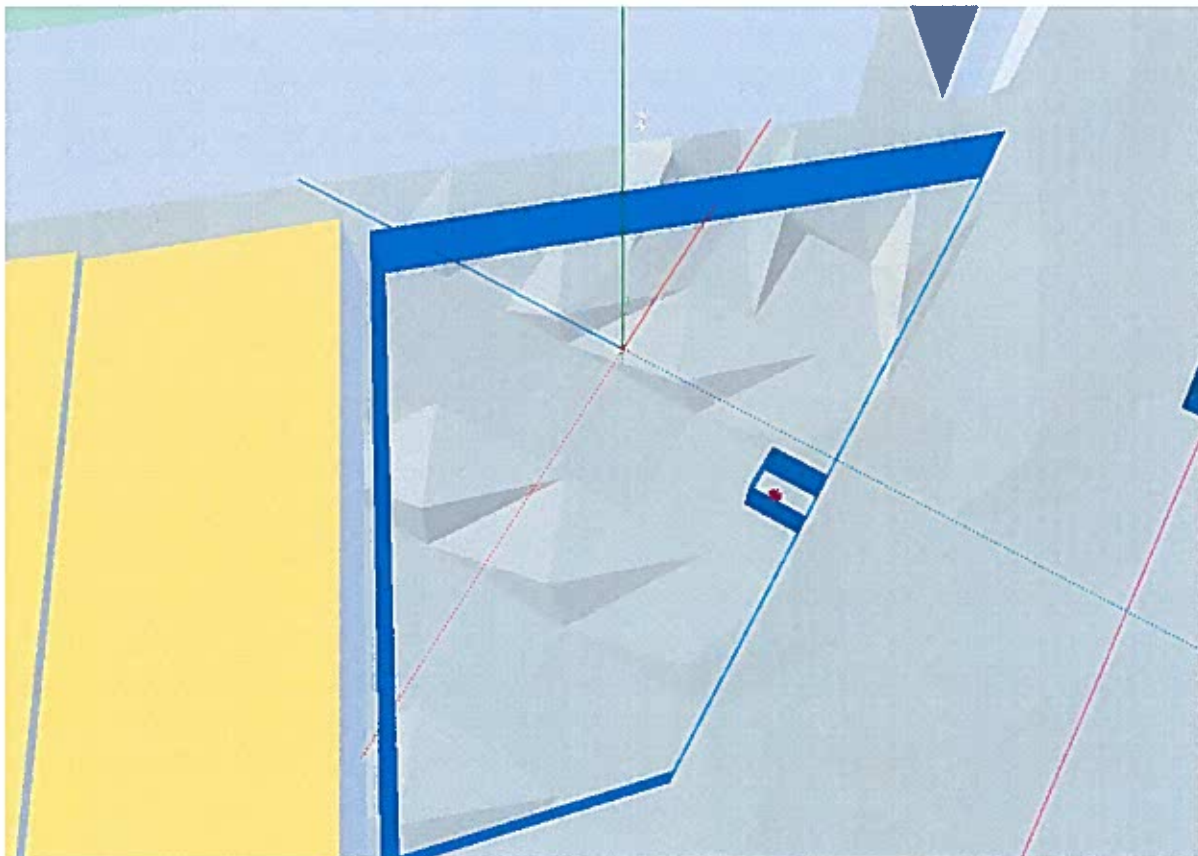


Figure 3. Ventilation Fan setup at Canon Yard (Colors do not represent any noise values)

RD -11 is located to the east of the work area on Wilshire Blvd and is directly exposed to the noise levels from the construction.

A 15 feet high Noise barrier along the east boundary and, 14 feet high barrier along north, south and west section of the work area will be required to shield the RD-11 Elevated receptor from the construction Noise during the Night Time work as shown in the figure below.

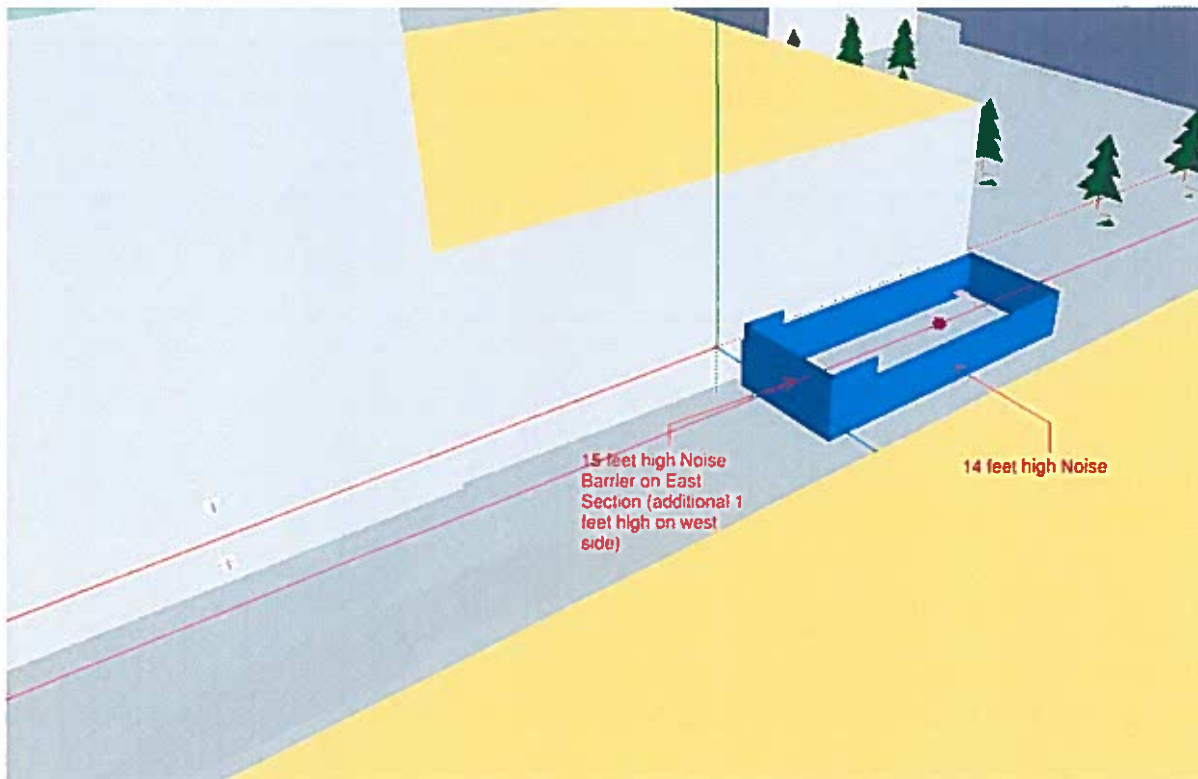


Figure 4. Noise Enclosure around work area (Colors do not represent any noise values)

Another critical receptor for this construction work is RD-10 which is located to the south west for the work on Wilshire. This receptor will be closely monitored for noise trends and equipment utilization shall be reduced by 10% or less if the noise levels more than the predicted levels are recorded during the construction work.

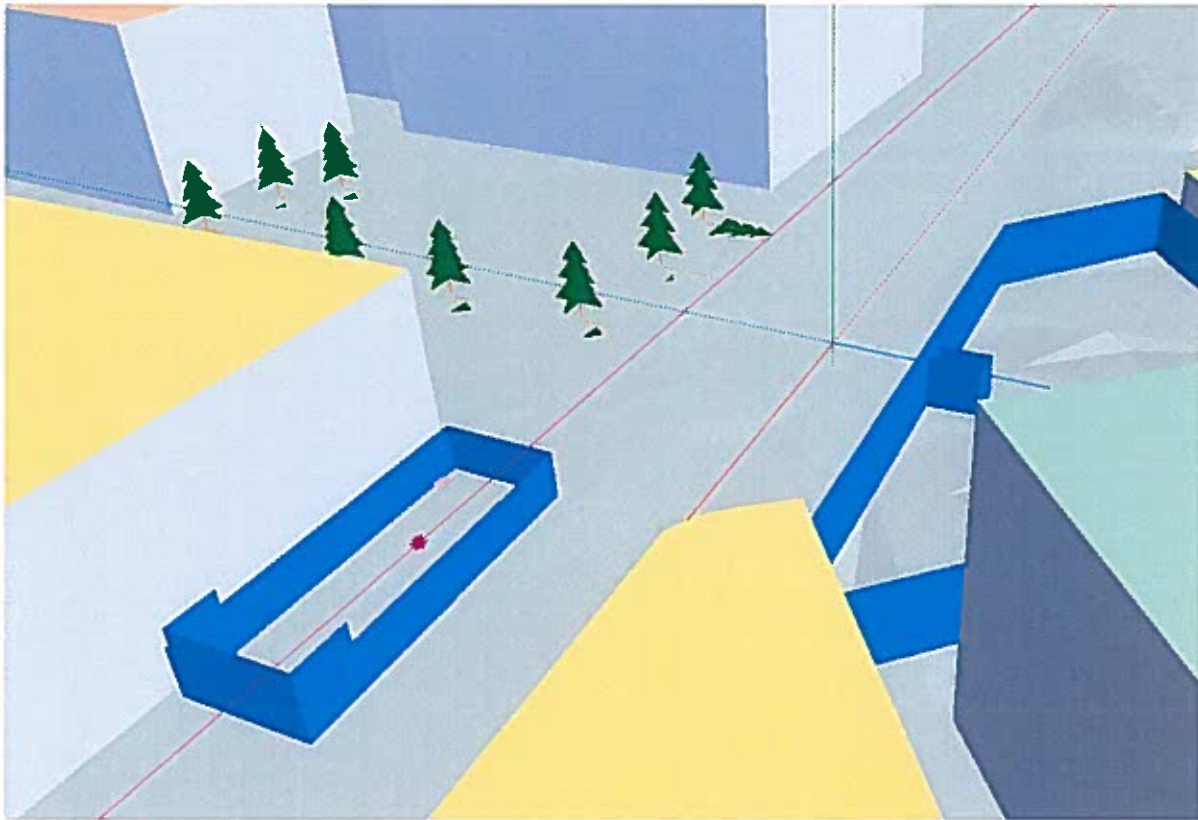


Figure 5. Receptor RD-10 (Colors do not represent any noise values)

Due to given vicinity of the RD-7 and RD-16 from the staging yards, they should be closely monitored for any exceedances.



Figure 6. Predicted Noise Levels –Contour Plot for Noise propagation at Ground Level (Receptor color indicate maximum façade noise level)

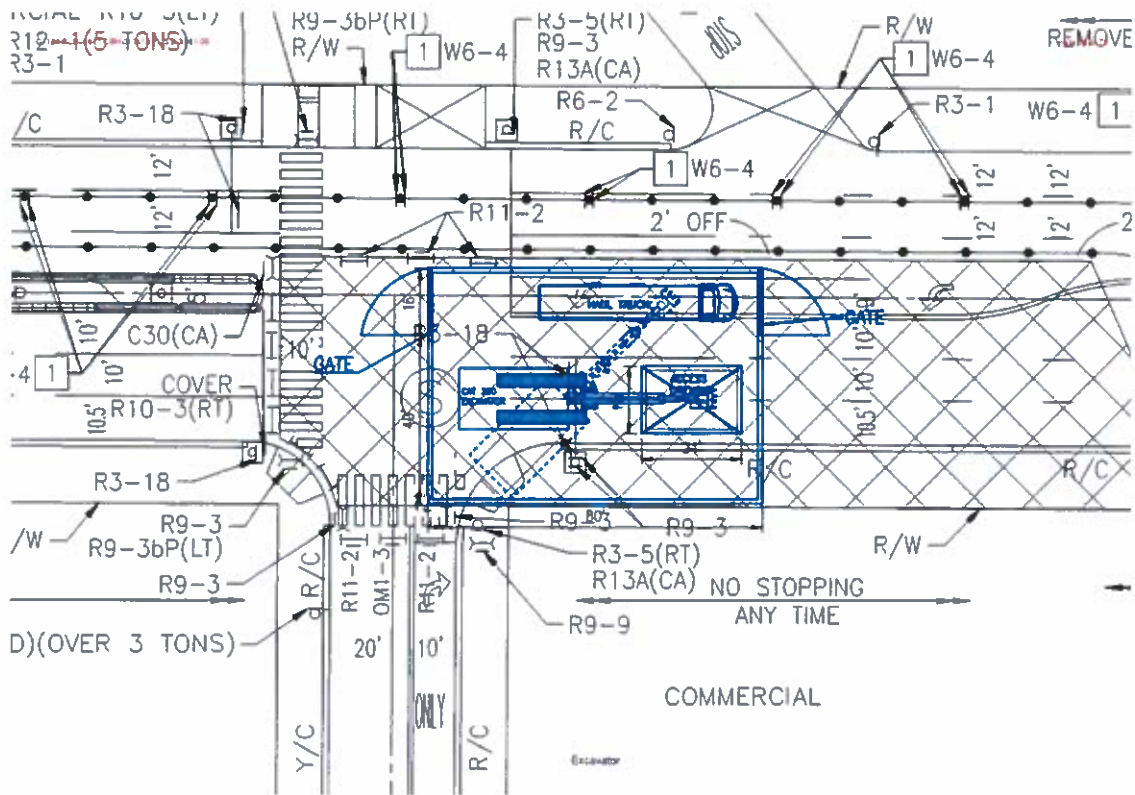
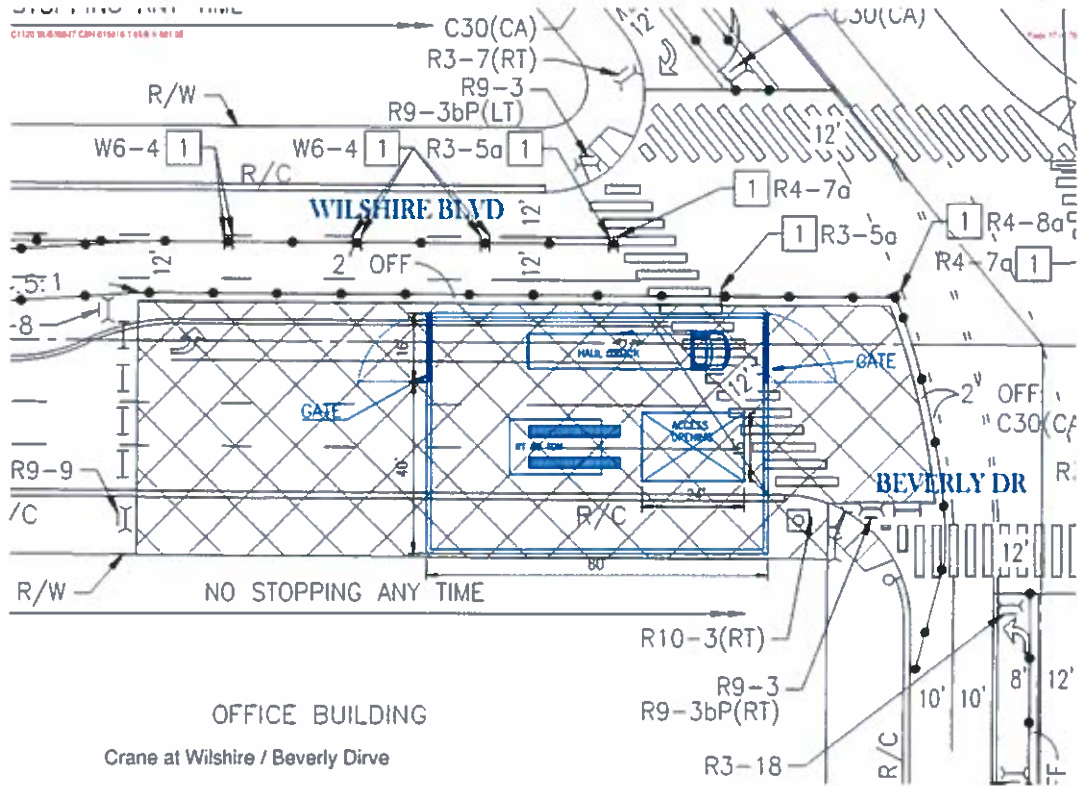
5. Mitigation Measures

Based on the simulations following mitigation measures will be taken:

- 1) Excavation area will be surrounded by 14 ft noise barrier (NRC= 0.85) with 15 feet additional noise barrier east of the excavation area as discussed in the section above.
- 2) Equipment utilization shall be reduced by 10% to meet the noise threshold if the trend at any of the receptors seems to approach toward exceedance
- 3) Completely switch off dump trucks during loading and idling.
- 4) If during noise monitoring Lmax level exceeds the threshold value following actions will be taken:
 1. Contractor shall switch equipment to meet noise requirements. OR
 2. Contractor shall modify work hours to meet noise requirements. OR
 3. Contractor shall use other available noise reduction measures.
- 5) Noise from a construction activity and/or construction equipment shall comply with all noise requirements identified in Article XIV of the MOA, which includes the Lmax noise limits. If the activity, the equipment in use and/or the sound enclosure for the equipment are modified or the equipment is operated at a location not identified in the noise control plan, the noise control plan shall be revised to address the changed conditions and resubmitted to the City for review and approval. The use of non-compliant equipment and/or engaging in a construction activity that exceeds the MOA identified noise limits including Lmax noise level shall not continue until the City approves a noise control plan revision and/or the implementation of noise mitigation to ensure that the equipment complies with noise limits identified in Article XIV.”
- 6) To reduce noise levels at Wilshire / Beverly intake grate, install additional silencer at each intake fan, see Appendix D for silencer product data



APPENDIX A- SITE PLAN SCHEMATIC





APPENDIX B- Noise Certification for Excavator

FIGURE 3

EQUIPMENT NOISE LEVEL DATA REPORTING FORM

APPLICATION FOR CERTIFICATE OF EQUIPMENT NOISE COMPLIANCE

Contractor Name: TPOGJV
 Contract Name & Number: Tutor Perini and O&G JV
 Equipment Type: Excavator
 Manufacturer & Model Number: CAT 390
 Identification Number: FHHNG00186
 Rated Power & Capacity: 405 HP
 Operating Condition During Test: (Specify, Record, Describe, or Attach Test Conditions)

Measured Sound Levels at 20 to 50 feet:

Measured Values and Distance:

Right Side: 74.4 dBA (SLOW) at 50 feet
 Left Side: 74 dBA (SLOW) at 50 feet

Estimated Values at 50-Foot Distance:

Right Side: _____ dBA (SLOW).
 Left Side: _____ dBA (SLOW).

Maximum Values Allowed for this Equipment: 81 (See per 80001 50 10) dBA (SLOW) at 50 feet.

If equipment sound level exceeds maximum value allowed, indicate action taken to achieve compliance:

Name, Address & Phone No. of Acoustical Engineer: Dr. Dots Oyenuka, 3767 Overland Avenue, Los Angeles 90034, Suite 115, +1-510 207 1387

Authorized Signature: [Signature] Date: 6/12/20
 CONTRACTOR'S APPROVAL: _____ Date: _____
 Authorized Signature: _____ Date: _____
 ENGINEER'S CONCURRENCE: _____ Date: _____
 Authorized Signature: _____ Date: _____



APPENDIX C- Noise Certification for Ventilation Fans – For Reference Only

EQUIPMENT NOISE LEVEL DATA REPORTING FORM

APPLICATION FOR CERTIFICATE OF EQUIPMENT NOISE COMPLIANCE

Contractor Name: TPOG
Contract Name & Number: MTA Purple line Extension 2 , C1120

Equipment Type: Ventillation Fan
Manufacturer & Model Number: R-5300-B-SS-XP
Identification Number: 300 HP
Rated Power & Capacity: _____
Operating Condition During Test: Sunny, Clear Sky

Measured Sound Levels at 20 to 50 feet:

Measured Values and Distance: There were obstructions blocking the right side of the ventilation fans, as a result of which the noise level for right side is lower than the left.

Right Side: 76.4 dBA (SLOW), at 50 feet
Left Side: 82.4 dBA (SLOW), at 50 feet

Estimated Values at 50-Foot Distance:

Right Side: _____ dBA (SLOW).
Left Side: _____ dBA (SLOW).

Maximum Values Allowed for this Equipment: 85 dBA (SLOW) at 50 feet.

Note: Equipment was operated at maximum governed rpm under full load conditions during the tests. All tests were performed under the supervision of the Acoustical Engineer.

If equipment sound level exceeds maximum value allowed, indicate action taken to achieve compliance:

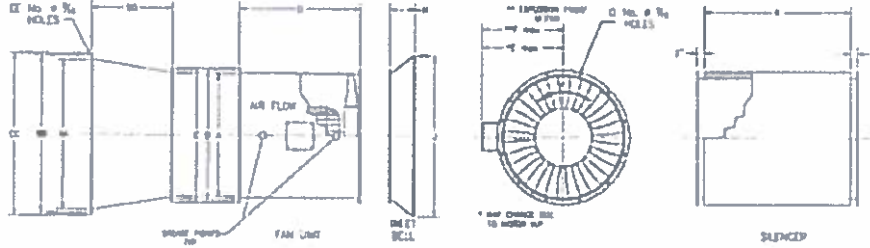
Name, Address & Phone No. of Acoustical Engineer: Dr. Dots Oyenuga, 3767 Overland Avenue, Suite # 115, (510) 207 1387

Authorized Signature: _____ Date: 02/20/20
CONTRACTOR'S APPROVAL:
Authorized Signature: _____ Date: _____
ENGINEER'S CONCURRENCE:
Authorized Signature: _____ Date: _____

JETAIR

A Division of Mining Equipment Limited

JETAIR FANS
P.O. BOX 2114
DURANGO CO. 81302
PH. (970) 259-8412
www.jetairfans.com

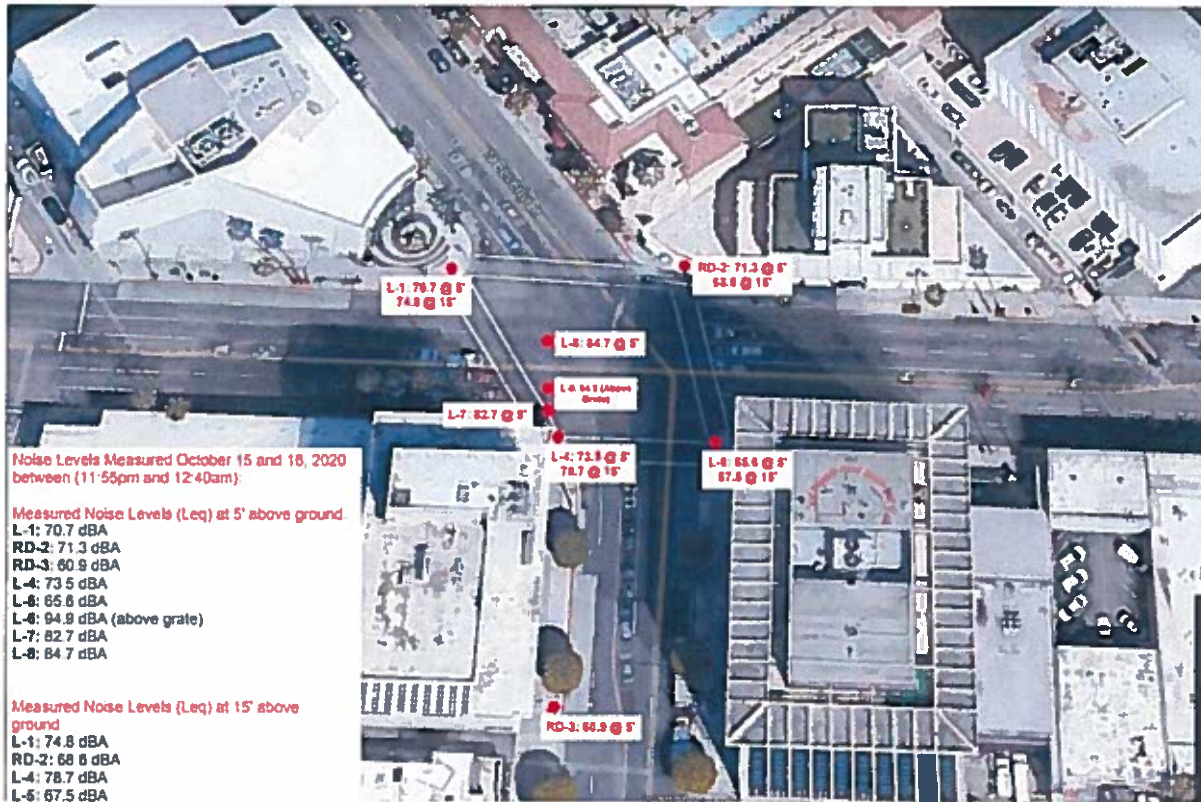


SINGLE STAGE FAN WITH ADJUSTABLE PITCH

CANOPY DIA.	FAN UNIT DIA.	INLET BELL DIA.
42 IN (1067 mm)	36 IN	36 IN
48 IN (1219 mm)	36 IN	36 IN
54 IN (1372 mm)	36 IN	36 IN

CANOPY DIA.		DIMENSIONS (INCHES)																	
		FAN UNIT								INLET/OUTLET CONE				INLET BELL		BLANCO		CASE DIA.	
A	HP	QFM	SHA	B	C	D	E	G	HA	HB	HC	HD	HE	H	L	R	S	T	
18	2-11	3000	54	18.78	21.25	28	17	17	23	23.78	28.24	17	17	9	21.17	26	16		
21 1/2	10-25	3200	17	21.18	24.66	30	19	17	26	27.78	32.24	14	12	4.57	27.69	42	21 1/2		
24 1/2	8-22	3200	14.71	25.14	29.68	30	19	17	29	29.66	34.24	14	12	9	29.19	48	24 1/2		
27 1/2	10-28	3200	14.71	27.18	30.88	30	21	17	32	32.78	38.12	20	12	8.52	31	50	27 1/2		
30 1/2	20-70	3200	14.71	29.18	32.88	30	21	17	35	35.78	41.12	20	12	9	33.12	54	30 1/2		
33 1/2	30-70	3200	14.71	31.18	34.88	40	23	17	38	38.78	46.12	20	12	8.56	35	60	33 1/2		
	100	3200	21	31.18	36.88	42	23	12	41	41.78	49.12	20	12	9.24	36	66	36 1/2		
36 1/2	60-100	3200	17.71	33.18	38.88	30	24	12	44	44.78	52.12	24	12	9.24	41	84	36 1/2		
	75-120	3000	21	33.18	38.88	42	24	12	47	47.78	56.12	24	12	9.24	42	90	39 1/2		
42	75-80	3600	14.71	35.78	40.88	30	24.58	12	50	51.78	60.12	24	18	9.12	47.50	84	42		
48	60-80	3600	21.71	35.78	42.88	30	25.12	12	53	53.78	62.12	24	18	7.50	48.50	84	48		
54	70-75	3600	21.71	36.24	43.24	30	25.12	12	56	56.78	65.12	24	18	7.52	49	72	54		
	70-120	3200*1800	21.71	36.24	43.24	40	25.12	12	59	59.78	68.12	24	18	7.52	49	72	54		
60	40-120	3200*1800	21.71	40.14	47.14	40	25.12	12	62	62.78	71.12	24	18	9	50	84	60 1/2		
66	20-120	3600*1800	21.71	42.24	49.24	40	25.12	12	65	65.78	74.12	24	18	9	51	84	66 1/2		
72	30-120	3600	30	42.24	49.24	40	25.12	12	68	68.78	77.12	24	18	9	51	90	72		
78	41-130	3200*1800	21.71	44.14	49.14	40	25.12	12	71	71.78	80.12	24	18	9	51	90	78 1/2		
84	40-120	3200*1800	21.71	44.14	49.14	40	25.12	12	74	74.78	83.12	24	18	9	51	90	84 1/2		
90	30-120	3600	30	44.14	49.14	40	25.12	12	77	77.78	86.12	24	18	9	51	90	90 1/2		
	200-320	1800	30	44.14	49.14	40	25.12	12	80	80.78	89.12	24	18	9	51	90	96 1/2		
96	61-130	3200*1800	21.71	46.14	51.14	40	25.12	12	83	83.78	92.12	24	18	9.12	51	96	96 1/2		
	270-370	1800	30	46.14	51.14	40	25.12	12	86	86.78	95.12	24	18	9	51	96	102 1/2		
102	60-120	3600	30	46.14	51.14	40	25.12	12	89	89.78	98.12	24	18	9.12	51	96	108 1/2		
	270	1800	30	46.14	51.14	40	25.12	12	92	92.78	101.12	24	18	9	51	96	114 1/2		
	270-400	1800	30	46.14	51.14	40	25.12	12	95	95.78	104.12	24	18	9	51	96	120 1/2		
108	120	1200	30	46.14	51.14	40	25.12	12	98	98.78	107.12	24	18	9	51	96	126 1/2		
	150-200	1200	30	46.14	51.14	40	25.12	12	101	101.78	110.12	24	18	9	51	96	132 1/2		
114	120	1200	30	46.14	51.14	40	25.12	12	104	104.78	113.12	24	18	9	51	96	138 1/2		
	150-200	1200	30	46.14	51.14	40	25.12	12	107	107.78	116.12	24	18	9	51	96	144 1/2		
	200-250	1200	30	46.14	51.14	40	25.12	12	110	110.78	119.12	24	18	9	51	96	150 1/2		
120	120	1200	30	46.14	51.14	40	25.12	12	113	113.78	122.12	24	18	9	51	96	156 1/2		
	150-200	1200	30	46.14	51.14	40	25.12	12	116	116.78	125.12	24	18	9	51	96	162 1/2		
	200-250	1200	30	46.14	51.14	40	25.12	12	119	119.78	128.12	24	18	9	51	96	168 1/2		

APPENDIX D – Metal Grate Sound Profile



Calculated Sound Power Level



Receiver Point	Leq
L-1 (5ft)	70.7
RD-2	68
RD-2 (15 ft)	70
RD-3	61.8
L-1 (15 ft)	74.8
L-4 (5ft)	75.3
L-4 (15 ft)	77.2
L-5 (5ft)	67.3
L-5 (15 ft)	69.6
L-6 (5ft)	100
L-7 (5ft)	81.5
L-8 (5ft)	84

Ventilation Intake Silencer- Product Data

VIBRO-ACOUSTICS®

Noise Control | Vibration Isolation | Restraint Systems

tel: 416-291-7371 1-800-565-8401 web: www.vibro-acoustics.com
 fax: 416-291-8049 1-888-811-2264 email: info@vibro-acoustics.com

CIRCULAR DISSIPATIVE

CD

File No.: 03A-003 Date: 17 Sep 2013
 Supersedes: 03A-002 Date: 19 Aug 2013

QTY: 2		TAG: SA-1,SA-2			
Submitted for: Approval	Dwg #: 26170-1	Rev #: 0	Drawn by:	Rev. Date: 01 Oct, 2020	Rev. by:
Project Metro PLE2		Customer CSDA Design Group		Customer P.O. No.	
V-A Project No. 1142142	V-A Project Manager		Consultant		

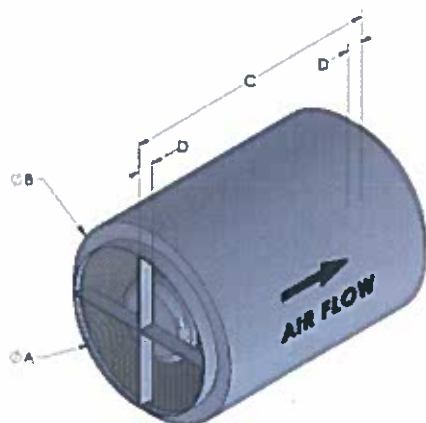
Performance for Model CD-UHV-F1

Airflow CFM	Velocity (L/s)	Velocity FPM	Velocity (m/s)	Pressure Drop		Pressure Drop w/ System Effects*		Dynamic Insertion Loss (dB)							
				in. w.g.	(Pa)	in. w.g.	(Pa)	63 Hz	125 Hz	250 Hz	500 Hz	1 KHz	2 KHz	4 KHz	8 KHz
51000	24,102	4658	21	0.03	8	0.04	11	9	11	14	13	9	7	5	4

Silencer performance data has been obtained from tests conducted in a laboratory facility NVLAP accredited for the ASTM E477-06a test standard.

* Duct configuration must be known for at least 5 duct diameters upstream and downstream of the silencer to determine pressure drop with system effects

Dimensions and Weights



Silencer Size (in./mm)				Total Wt
A	B	C	D	(lb./kg)
48	64	84	2	1,053

Construction

Casing	12 Ga (2.75 mm) Galvanized
	Continuously Welded
Perforated Liner	22 Ga (0.85 mm) Galvanized
Media Fill	Acoustic Grade Glass Fiber
Media Protection	None
End connections	2" (51 mm) slip connection
Accessories	None

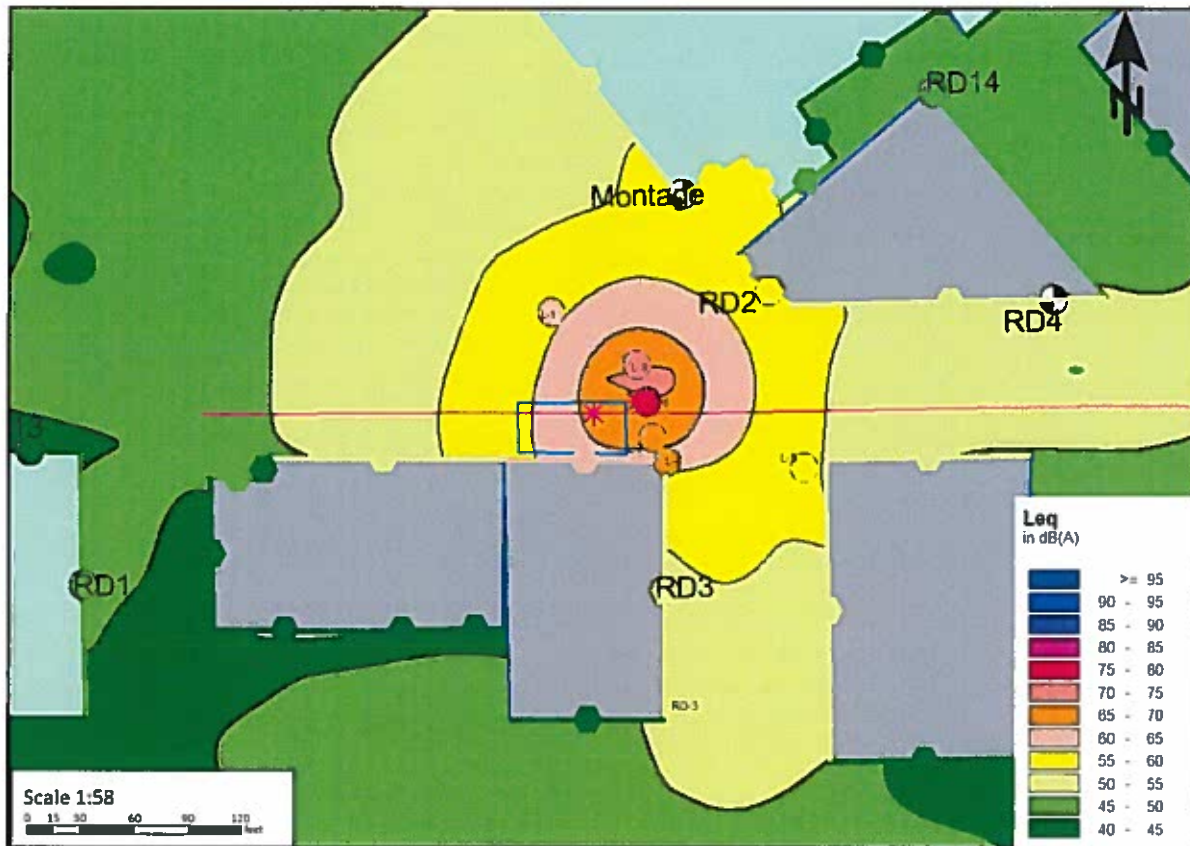
Ratings

Pressure rating	8 in H ₂ O (1822 Pa)	
Combustion rating (ASTM E84 or CAN/ULC S.102)	Flamespread classification	< 25
	Smoke development rating	< 50

Notes

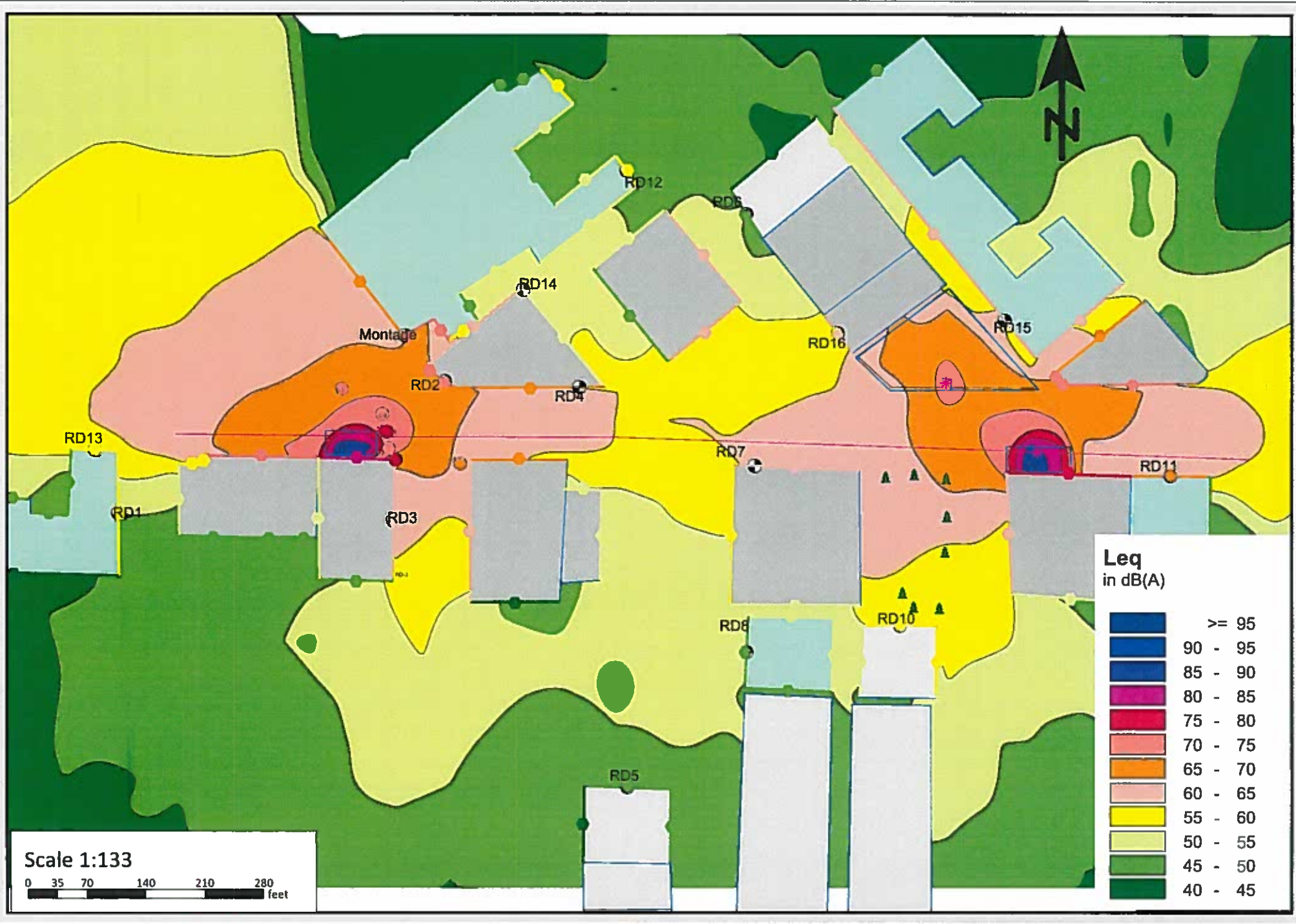
- Customer to confirm all dimensions.
- Silencer construction meets applicable requirements of SMACNA Duct Construction Standards, ASHRAE 62.1, UL181, ASTM C1071, NFPA 90A and NFPA 90B.
- Lubricants and sealants used during manufacturing may contain silicone.
- Gauges and thicknesses are based on SMACNA standard nominal and will vary within prescribed tolerances.
- Electronic document links:
[Dissipative Straight Silencers](#)
[Installation Instructions / Operation & Maintenance](#)
[NVLAP Accreditation](#)

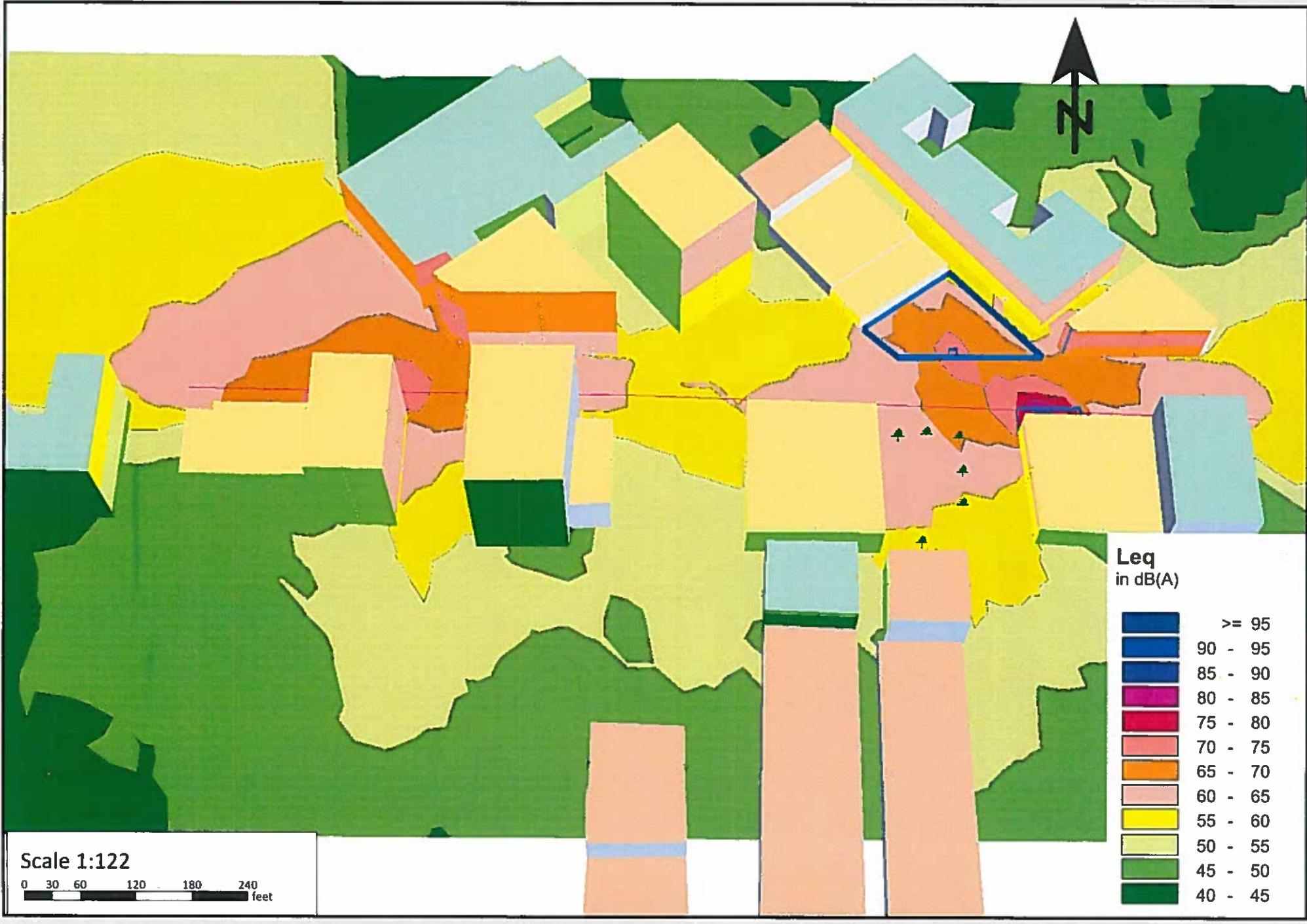
Calculated Sound Power Level after using Noise Silencer for the Vent intake

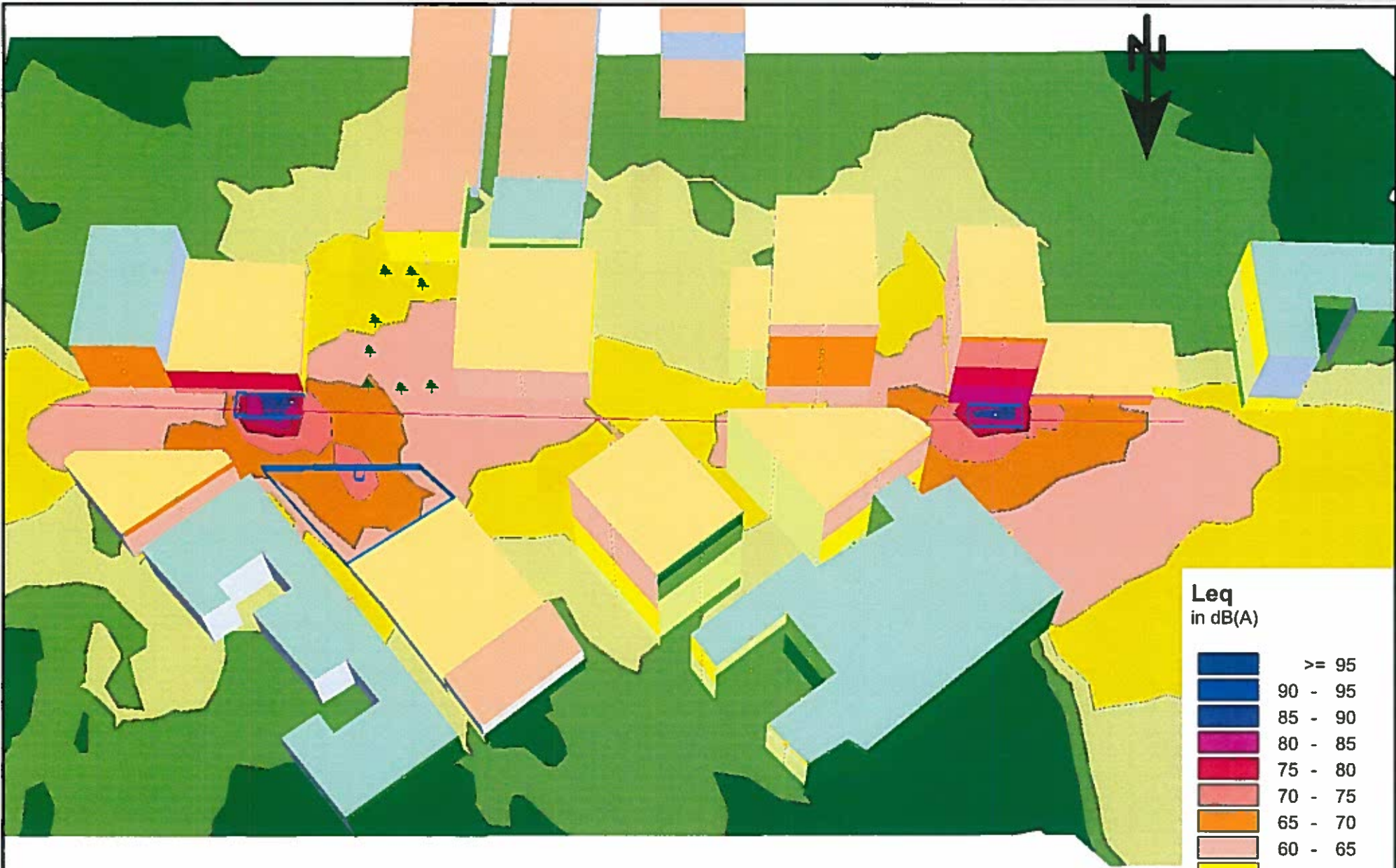


Receiver Point	Leq
L-1 (5ft)	59
RD-2	56
RD-2 (15 ft)	58
RD-3	50
L-1 (15 ft)	61
L-4 (5ft)	63.3
L-4 (15 ft)	66
L-5 (5ft)	56
L-5 (15 ft)	58
L-6 (5ft)	79
L-7 (5ft)	69
L-8 (5ft)	72.2

APPENDIX E - RESULTS







Leq
in dB(A)

Dark Blue	>= 95
Blue	90 - 95
Light Blue	85 - 90
Magenta	80 - 85
Red	75 - 80
Light Red	70 - 75
Orange	65 - 70
Light Orange	60 - 65
Yellow	55 - 60
Light Green	50 - 55
Green	45 - 50
Dark Green	40 - 45

Scale 1:122



RD 1 Weekday

Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	71	50	No
12:15:00 AM	70	50	No
12:30:00 AM	69	50	No
12:45:00 AM	69	50	No
1:00:00 AM	72	50	No
1:15:00 AM	68	50	No
1:30:00 AM	73	50	No
1:45:00 AM	70	50	No
2:00:00 AM	73	50	No
2:15:00 AM	67	50	No
2:30:00 AM	69	50	No
2:45:00 AM	68	50	No
3:00:00 AM	69	50	No
3:15:00 AM	70	50	No
3:30:00 AM	67	50	No
3:45:00 AM	67	50	No
4:00:00 AM	66	50	No
4:15:00 AM	70	50	No
4:30:00 AM	70	50	No
4:45:00 AM	71	50	No
5:00:00 AM	74	50	No
5:15:00 AM	74	50	No
5:30:00 AM	73	50	No
5:45:00 AM	72	50	No
6:00:00 AM	74	50	No
6:15:00 AM	76	50	No
6:30:00 AM	76	50	No
6:45:00 AM	76	50	No
7:00:00 AM	76	50	No
7:15:00 AM	75	50	No
7:30:00 AM	78	50	No
7:45:00 AM	76	50	No
8:00:00 AM	78	50	No
8:15:00 AM	77	50	No
8:30:00 AM	76	50	No
8:45:00 AM	76	50	No
9:00:00 AM	77	50	No
9:15:00 AM	86	50	No
9:30:00 AM	76	50	No
9:45:00 AM	76	50	No
10:00:00 AM	75	50	No
10:15:00 AM	76	50	No
10:30:00 AM	75	50	No
10:45:00 AM	74	50	No
11:00:00 AM	75	50	No
11:15:00 AM	75	50	No
11:30:00 AM	76	50	No
11:45:00 AM	75	50	No
12:00:00 PM	74	50	No
12:15:00 PM	75	50	No
12:30:00 PM	75	50	No
12:45:00 PM	75	50	No
1:00:00 PM	75	50	No
1:15:00 PM	77	50	No
1:30:00 PM	74	50	No
1:45:00 PM	83	50	No
2:00:00 PM	75	50	No
2:15:00 PM	74	50	No
2:30:00 PM	74	50	No

RD 1 Weekday			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:45:00 PM	74	50	No
3:00:00 PM	74	50	No
3:15:00 PM	75	50	No
3:30:00 PM	75	50	No
3:45:00 PM	74	50	No
4:00:00 PM	74	50	No
4:15:00 PM	75	50	No
4:30:00 PM	77	50	No
4:45:00 PM	75	50	No
5:00:00 PM	75	50	No
5:15:00 PM	81	50	No
5:30:00 PM	80	50	No
5:45:00 PM	80	50	No
6:00:00 PM	81	50	No
6:15:00 PM	74	50	No
6:30:00 PM	75	50	No
6:45:00 PM	81	50	No
7:00:00 PM	75	50	No
7:15:00 PM	77	50	No
7:30:00 PM	74	50	No
7:45:00 PM	74	50	No
8:00:00 PM	83	50	No
8:15:00 PM	75	50	No
8:30:00 PM	74	50	No
8:45:00 PM	75	50	No
9:00:00 PM	74	50	No
9:15:00 PM	75	50	No
9:30:00 PM	73	50	No
9:45:00 PM	75	50	No
10:00:00 PM	73	50	No
10:15:00 PM	73	50	No
10:30:00 PM	75	50	No
10:45:00 PM	72	50	No
11:00:00 PM	72	50	No
11:15:00 PM	73	50	No
11:30:00 PM	71	50	No
11:45:00 PM	71	50	No

RD1 Weekend			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	71	50	No
12:15:00 AM	70	50	No
12:30:00 AM	71	50	No
12:45:00 AM	70	50	No
1:00:00 AM	69	50	No
1:15:00 AM	70	50	No
1:30:00 AM	69	50	No
1:45:00 AM	68	50	No
2:00:00 AM	68	50	No
2:15:00 AM	72	50	No
2:30:00 AM	68	50	No
2:45:00 AM	69	50	No
3:00:00 AM	76	50	No
3:15:00 AM	67	50	No
3:30:00 AM	76	50	No
3:45:00 AM	66	50	No
4:00:00 AM	65	50	No
4:15:00 AM	69	50	No
4:30:00 AM	67	50	No
4:45:00 AM	70	50	No
5:00:00 AM	66	50	No
5:15:00 AM	67	50	No
5:30:00 AM	66	50	No
5:45:00 AM	68	50	No
6:00:00 AM	70	50	No
6:15:00 AM	70	50	No
6:30:00 AM	70	50	No
6:45:00 AM	70	50	No
7:00:00 AM	70	50	No
7:15:00 AM	70	50	No
7:30:00 AM	71	50	No
7:45:00 AM	71	50	No
8:00:00 AM	71	50	No
8:15:00 AM	72	50	No
8:30:00 AM	71	50	No
8:45:00 AM	71	50	No
9:00:00 AM	72	50	No
9:15:00 AM	72	50	No
9:30:00 AM	72	50	No
9:45:00 AM	73	50	No
10:00:00 AM	72	50	No
10:15:00 AM	72	50	No
10:30:00 AM	74	50	No
10:45:00 AM	73	50	No
11:00:00 AM	74	50	No
11:15:00 AM	74	50	No
11:30:00 AM	73	50	No
11:45:00 AM	84	50	No
12:00:00 PM	73	50	No
12:15:00 PM	74	50	No
12:30:00 PM	73	50	No
12:45:00 PM	73	50	No
1:00:00 PM	73	50	No
1:15:00 PM	72	50	No
1:30:00 PM	74	50	No
1:45:00 PM	73	50	No
2:00:00 PM	72	50	No

RDI Weekend			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	73	50	No
2:30:00 PM	73	50	No
2:45:00 PM	72	50	No
3:00:00 PM	82	50	No
3:15:00 PM	72	50	No
3:30:00 PM	72	50	No
3:45:00 PM	76	50	No
4:00:00 PM	78	50	No
4:15:00 PM	74	50	No
4:30:00 PM	73	50	No
4:45:00 PM	77	50	No
5:00:00 PM	73	50	No
5:15:00 PM	72	50	No
5:30:00 PM	72	50	No
5:45:00 PM	74	50	No
6:00:00 PM	73	50	No
6:15:00 PM	73	50	No
6:30:00 PM	76	50	No
6:45:00 PM	72	50	No
7:00:00 PM	74	50	No
7:15:00 PM	74	50	No
7:30:00 PM	74	50	No
7:45:00 PM	75	50	No
8:00:00 PM	74	50	No
8:15:00 PM	75	50	No
8:30:00 PM	76	50	No
8:45:00 PM	73	50	No
9:00:00 PM	75	50	No
9:15:00 PM	74	50	No
9:30:00 PM	75	50	No
9:45:00 PM	75	50	No
10:00:00 PM	72	50	No
10:15:00 PM	74	50	No
10:30:00 PM	73	50	No
10:45:00 PM	73	50	No
11:00:00 PM	72	50	No
11:15:00 PM	80	50	No
11:30:00 PM	75	50	No
11:45:00 PM	72	50	No

RD2 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	74	65	No
12:15:00 AM	75	65	No
12:30:00 AM	73	65	No
12:45:00 AM	83	65	No
1:00:00 AM	73	65	No
1:15:00 AM	71	65	No
1:30:00 AM	79	65	No
1:45:00 AM	80	65	No
2:00:00 AM	71	65	No
2:15:00 AM	73	65	No
2:30:00 AM	71	65	No
2:45:00 AM	70	65	No
3:00:00 AM	76	65	No
3:15:00 AM	73	65	No
3:30:00 AM	69	65	No
3:45:00 AM	71	65	No
4:00:00 AM	71	65	No
4:15:00 AM	71	65	No
4:30:00 AM	75	65	No
4:45:00 AM	74	65	No
5:00:00 AM	75	65	No
5:15:00 AM	75	65	No
5:30:00 AM	76	65	No
5:45:00 AM	77	65	No
6:00:00 AM	77	65	No
6:15:00 AM	79	65	No
6:30:00 AM	83	65	No
6:45:00 AM	80	65	No
7:00:00 AM	83	65	No
7:15:00 AM	80	65	No
7:30:00 AM	81	65	No
7:45:00 AM	82	65	No
8:00:00 AM	82	65	No
8:15:00 AM	80	65	No
8:30:00 AM	80	65	No
8:45:00 AM	81	65	No
9:00:00 AM	80	65	No
9:15:00 AM	81	65	No
9:30:00 AM	80	65	No
9:45:00 AM	80	65	No
10:00:00 AM	82	65	No
10:15:00 AM	80	65	No
10:30:00 AM	80	65	No
10:45:00 AM	80	65	No
11:00:00 AM	80	65	No
11:15:00 AM	79	65	No
11:30:00 AM	78	65	No
11:45:00 AM	79	65	No
12:00:00 PM	84	65	No
12:15:00 PM	81	65	No
12:30:00 PM	80	65	No
12:45:00 PM	79	65	No
1:00:00 PM	81	65	No
1:15:00 PM	80	65	No
1:30:00 PM	79	65	No
1:45:00 PM	80	65	No

RD2 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:00:00 PM	81	65	No
2:15:00 PM	79	65	No
2:30:00 PM	80	65	No
2:45:00 PM	80	65	No
3:00:00 PM	79	65	No
3:15:00 PM	79	65	No
3:30:00 PM	80	65	No
3:45:00 PM	80	65	No
4:00:00 PM	80	65	No
4:15:00 PM	78	65	No
4:30:00 PM	77	65	No
4:45:00 PM	79	65	No
5:00:00 PM	80	65	No
5:15:00 PM	81	65	No
5:30:00 PM	80	65	No
5:45:00 PM	80	65	No
6:00:00 PM	79	65	No
6:15:00 PM	78	65	No
6:30:00 PM	79	65	No
6:45:00 PM	79	65	No
7:00:00 PM	80	65	No
7:15:00 PM	78	65	No
7:30:00 PM	78	65	No
7:45:00 PM	78	65	No
8:00:00 PM	78	65	No
8:15:00 PM	79	65	No
8:30:00 PM	77	65	No
8:45:00 PM	80	65	No
9:00:00 PM	77	65	No
9:15:00 PM	78	65	No
9:30:00 PM	78	65	No
9:45:00 PM	77	65	No
10:00:00 PM	83	65	No
10:15:00 PM	78	65	No
10:30:00 PM	80	65	No
10:45:00 PM	76	65	No
11:00:00 PM	80	65	No
11:15:00 PM	78	65	No
11:30:00 PM	74	65	No
11:45:00 PM	74	65	No

RD2 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	81	65	No
12:15:00 AM	73	65	No
12:30:00 AM	74	65	No
12:45:00 AM	72	65	No
1:00:00 AM	71	65	No
1:15:00 AM	72	65	No
1:30:00 AM	72	65	No
1:45:00 AM	71	65	No
2:00:00 AM	71	65	No
2:15:00 AM	76	65	No
2:30:00 AM	74	65	No
2:45:00 AM	80	65	No
3:00:00 AM	75	65	No
3:15:00 AM	70	65	No
3:30:00 AM	70	65	No
3:45:00 AM	69	65	No
4:00:00 AM	67	65	No
4:15:00 AM	69	65	No
4:30:00 AM	69	65	No
4:45:00 AM	72	65	No
5:00:00 AM	67	65	No
5:15:00 AM	66	65	No
5:30:00 AM	71	65	No
5:45:00 AM	72	65	No
6:00:00 AM	70	65	No
6:15:00 AM	70	65	No
6:30:00 AM	71	65	No
6:45:00 AM	73	65	No
7:00:00 AM	81	65	No
7:15:00 AM	73	65	No
7:30:00 AM	74	65	No
7:45:00 AM	74	65	No
8:00:00 AM	75	65	No
8:15:00 AM	76	65	No
8:30:00 AM	76	65	No
8:45:00 AM	75	65	No
9:00:00 AM	75	65	No
9:15:00 AM	76	65	No
9:30:00 AM	76	65	No
9:45:00 AM	77	65	No
10:00:00 AM	76	65	No
10:15:00 AM	80	65	No
10:30:00 AM	77	65	No
10:45:00 AM	76	65	No
11:00:00 AM	77	65	No
11:15:00 AM	77	65	No
11:30:00 AM	78	65	No
11:45:00 AM	80	65	No
12:00:00 PM	78	65	No
12:15:00 PM	77	65	No
12:30:00 PM	79	65	No
12:45:00 PM	79	65	No
1:00:00 PM	78	65	No
1:15:00 PM	77	65	No
1:30:00 PM	76	65	No
1:45:00 PM	77	65	No

RD2 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:00:00 PM	77	65	No
2:15:00 PM	84	65	No
2:30:00 PM	78	65	No
2:45:00 PM	79	65	No
3:00:00 PM	85	65	No
3:15:00 PM	78	65	No
3:30:00 PM	77	65	No
3:45:00 PM	77	65	No
4:00:00 PM	81	65	No
4:15:00 PM	78	65	No
4:30:00 PM	79	65	No
4:45:00 PM	79	65	No
5:00:00 PM	79	65	No
5:15:00 PM	77	65	No
5:30:00 PM	77	65	No
5:45:00 PM	81	65	No
6:00:00 PM	77	65	No
6:15:00 PM	78	65	No
6:30:00 PM	76	65	No
6:45:00 PM	76	65	No
7:00:00 PM	78	65	No
7:15:00 PM	78	65	No
7:30:00 PM	84	65	No
7:45:00 PM	79	65	No
8:00:00 PM	80	65	No
8:15:00 PM	77	65	No
8:30:00 PM	80	65	No
8:45:00 PM	77	65	No
9:00:00 PM	78	65	No
9:15:00 PM	78	65	No
9:30:00 PM	83	65	No
9:45:00 PM	79	65	No
10:00:00 PM	77	65	No
10:15:00 PM	79	65	No
10:30:00 PM	77	65	No
10:45:00 PM	76	65	No
11:00:00 PM	76	65	No
11:15:00 PM	76	65	No
11:30:00 PM	76	65	No
11:45:00 PM	76	65	No

RD2 Elevated Receiver			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	74	67	No
12:15:00 AM	74	67	No
12:30:00 AM	73	67	No
12:45:00 AM	83	67	No
1:00:00 AM	73	67	No
1:15:00 AM	71	67	No
1:30:00 AM	79	67	No
1:45:00 AM	80	67	No
2:00:00 AM	70	67	No
2:15:00 AM	72	67	No
2:30:00 AM	71	67	No
2:45:00 AM	70	67	No
3:00:00 AM	76	67	No
3:15:00 AM	72	67	No
3:30:00 AM	68	67	No
3:45:00 AM	70	67	No
4:00:00 AM	71	67	No
4:15:00 AM	71	67	No
4:30:00 AM	75	67	No
4:45:00 AM	74	67	No
5:00:00 AM	75	67	No
5:15:00 AM	75	67	No
5:30:00 AM	76	67	No
5:45:00 AM	77	67	No
6:00:00 AM	77	67	No
6:15:00 AM	79	67	No
6:30:00 AM	83	67	No
6:45:00 AM	80	67	No
7:00:00 AM	83	67	No
7:15:00 AM	80	67	No
7:30:00 AM	81	67	No
7:45:00 AM	81	67	No
8:00:00 AM	81	67	No
8:15:00 AM	80	67	No
8:30:00 AM	80	67	No
8:45:00 AM	80	67	No
9:00:00 AM	80	67	No
9:15:00 AM	80	67	No
9:30:00 AM	80	67	No
9:45:00 AM	80	67	No
10:00:00 AM	82	67	No
10:15:00 AM	79	67	No
10:30:00 AM	79	67	No
10:45:00 AM	79	67	No
11:00:00 AM	80	67	No
11:15:00 AM	79	67	No
11:30:00 AM	78	67	No
11:45:00 AM	79	67	No
12:00:00 PM	84	67	No
12:15:00 PM	81	67	No
12:30:00 PM	80	67	No
12:45:00 PM	78	67	No
1:00:00 PM	80	67	No
1:15:00 PM	80	67	No
1:30:00 PM	79	67	No
1:45:00 PM	79	67	No

RD2 Elevated Receiver			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:00:00 PM	81	67	No
2:15:00 PM	79	67	No
2:30:00 PM	80	67	No
2:45:00 PM	80	67	No
3:00:00 PM	79	67	No
3:15:00 PM	79	67	No
3:30:00 PM	79	67	No
3:45:00 PM	79	67	No
4:00:00 PM	80	67	No
4:15:00 PM	78	67	No
4:30:00 PM	77	67	No
4:45:00 PM	79	67	No
5:00:00 PM	80	67	No
5:15:00 PM	81	67	No
5:30:00 PM	80	67	No
5:45:00 PM	79	67	No
6:00:00 PM	79	67	No
6:15:00 PM	78	67	No
6:30:00 PM	79	67	No
6:45:00 PM	79	67	No
7:00:00 PM	79	67	No
7:15:00 PM	78	67	No
7:30:00 PM	78	67	No
7:45:00 PM	78	67	No
8:00:00 PM	78	67	No
8:15:00 PM	79	67	No
8:30:00 PM	77	67	No
8:45:00 PM	79	67	No
9:00:00 PM	77	67	No
9:15:00 PM	78	67	No
9:30:00 PM	77	67	No
9:45:00 PM	77	67	No
10:00:00 PM	82	67	No
10:15:00 PM	78	67	No
10:30:00 PM	80	67	No
10:45:00 PM	75	67	No
11:00:00 PM	80	67	No
11:15:00 PM	77	67	No
11:30:00 PM	74	67	No
11:45:00 PM	74	67	No

RD3 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	75	59	No
12:15:00 AM	72	59	No
12:30:00 AM	73	59	No
12:45:00 AM	70	59	No
1:00:00 AM	72	59	No
1:15:00 AM	70	59	No
1:30:00 AM	75	59	No
1:45:00 AM	70	59	No
2:00:00 AM	73	59	No
2:15:00 AM	70	59	No
2:30:00 AM	76	59	No
2:45:00 AM	79	59	No
3:00:00 AM	77	59	No
3:15:00 AM	67	59	No
3:30:00 AM	72	59	No
3:45:00 AM	66	59	No
4:00:00 AM	66	59	No
4:15:00 AM	67	59	No
4:30:00 AM	69	59	No
4:45:00 AM	72	59	No
5:00:00 AM	74	59	No
5:15:00 AM	75	59	No
5:30:00 AM	77	59	No
5:45:00 AM	77	59	No
6:00:00 AM	78	59	No
6:15:00 AM	79	59	No
6:30:00 AM	79	59	No
6:45:00 AM	78	59	No
7:00:00 AM	79	59	No
7:15:00 AM	79	59	No
7:30:00 AM	79	59	No
7:45:00 AM	78	59	No
8:00:00 AM	78	59	No
8:15:00 AM	79	59	No
8:30:00 AM	78	59	No
8:45:00 AM	77	59	No
9:00:00 AM	80	59	No
9:15:00 AM	80	59	No
9:30:00 AM	78	59	No
9:45:00 AM	77	59	No
10:00:00 AM	78	59	No
10:15:00 AM	77	59	No
10:30:00 AM	77	59	No
10:45:00 AM	77	59	No
11:00:00 AM	78	59	No
11:15:00 AM	77	59	No
11:30:00 AM	85	59	No
11:45:00 AM	77	59	No
12:00:00 PM	78	59	No
12:15:00 PM	78	59	No
12:30:00 PM	78	59	No
12:45:00 PM	78	59	No
1:00:00 PM	78	59	No
1:15:00 PM	77	59	No
1:30:00 PM	79	59	No
1:45:00 PM	79	59	No
2:00:00 PM	78	59	No

RD3 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	78	59	No
2:30:00 PM	78	59	No
2:45:00 PM	79	59	No
3:00:00 PM	78	59	No
3:15:00 PM	78	59	No
3:30:00 PM	80	59	No
3:45:00 PM	78	59	No
4:00:00 PM	78	59	No
4:15:00 PM	79	59	No
4:30:00 PM	79	59	No
4:45:00 PM	79	59	No
5:00:00 PM	80	59	No
5:15:00 PM	80	59	No
5:30:00 PM	81	59	No
5:45:00 PM	79	59	No
6:00:00 PM	81	59	No
6:15:00 PM	79	59	No
6:30:00 PM	78	59	No
6:45:00 PM	82	59	No
7:00:00 PM	78	59	No
7:15:00 PM	80	59	No
7:30:00 PM	80	59	No
7:45:00 PM	79	59	No
8:00:00 PM	82	59	No
8:15:00 PM	80	59	No
8:30:00 PM	79	59	No
8:45:00 PM	78	59	No
9:00:00 PM	81	59	No
9:15:00 PM	76	59	No
9:30:00 PM	78	59	No
9:45:00 PM	77	59	No
10:00:00 PM	76	59	No
10:15:00 PM	78	59	No
10:30:00 PM	79	59	No
10:45:00 PM	75	59	No
11:00:00 PM	76	59	No
11:15:00 PM	75	59	No
11:30:00 PM	74	59	No
11:45:00 PM	75	59	No

RD3 Weekend			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	75	59	No
12:15:00 AM	74	59	No
12:30:00 AM	74	59	No
12:45:00 AM	72	59	No
1:00:00 AM	71	59	No
1:15:00 AM	67	59	No
1:30:00 AM	67	59	No
1:45:00 AM	67	59	No
2:00:00 AM	72	59	No
2:15:00 AM	70	59	No
2:30:00 AM	71	59	No
2:45:00 AM	75	59	No
3:00:00 AM	72	59	No
3:15:00 AM	61	59	No
3:30:00 AM	66	59	No
3:45:00 AM	64	59	No
4:00:00 AM	64	59	No
4:15:00 AM	60	59	No
4:30:00 AM	60	59	No
4:45:00 AM	63	59	No
5:00:00 AM	65	59	No
5:15:00 AM	65	59	No
5:30:00 AM	69	59	No
5:45:00 AM	69	59	No
6:00:00 AM	70	59	No
6:15:00 AM	71	59	No
6:30:00 AM	72	59	No
6:45:00 AM	71	59	No
7:00:00 AM	72	59	No
7:15:00 AM	71	59	No
7:30:00 AM	72	59	No
7:45:00 AM	70	59	No
8:00:00 AM	72	59	No
8:15:00 AM	72	59	No
8:30:00 AM	73	59	No
8:45:00 AM	73	59	No
9:00:00 AM	72	59	No
9:15:00 AM	72	59	No
9:30:00 AM	73	59	No
9:45:00 AM	73	59	No
10:00:00 AM	72	59	No
10:15:00 AM	74	59	No
10:30:00 AM	76	59	No
10:45:00 AM	73	59	No
11:00:00 AM	72	59	No
11:15:00 AM	78	59	No
11:30:00 AM	77	59	No
11:45:00 AM	78	59	No
12:00:00 PM	78	59	No
12:15:00 PM	77	59	No
12:30:00 PM	80	59	No
12:45:00 PM	78	59	No
1:00:00 PM	80	59	No
1:15:00 PM	76	59	No
1:30:00 PM	76	59	No
1:45:00 PM	76	59	No
2:00:00 PM	76	59	No

RD3 Weekend			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	77	59	No
2:30:00 PM	78	59	No
2:45:00 PM	78	59	No
3:00:00 PM	78	59	No
3:15:00 PM	79	59	No
3:30:00 PM	77	59	No
3:45:00 PM	79	59	No
4:00:00 PM	81	59	No
4:15:00 PM	78	59	No
4:30:00 PM	78	59	No
4:45:00 PM	80	59	No
5:00:00 PM	81	59	No
5:15:00 PM	81	59	No
5:30:00 PM	79	59	No
5:45:00 PM	80	59	No
6:00:00 PM	79	59	No
6:15:00 PM	78	59	No
6:30:00 PM	79	59	No
6:45:00 PM	77	59	No
7:00:00 PM	78	59	No
7:15:00 PM	80	59	No
7:30:00 PM	79	59	No
7:45:00 PM	81	59	No
8:00:00 PM	78	59	No
8:15:00 PM	77	59	No
8:30:00 PM	83	59	No
8:45:00 PM	77	59	No
9:00:00 PM	77	59	No
9:15:00 PM	77	59	No
9:30:00 PM	80	59	No
9:45:00 PM	81	59	No
10:00:00 PM	77	59	No
10:15:00 PM	78	59	No
10:30:00 PM	76	59	No
10:45:00 PM	77	59	No
11:00:00 PM	78	59	No
11:15:00 PM	76	59	No
11:30:00 PM	76	59	No
11:45:00 PM	77	59	No

RD4 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	79	59	No
12:15:00 AM	78	59	No
12:30:00 AM	75	59	No
12:45:00 AM	87	59	No
1:00:00 AM	75	59	No
1:15:00 AM	73	59	No
1:30:00 AM	85	59	No
1:45:00 AM	83	59	No
2:00:00 AM	73	59	No
2:15:00 AM	74	59	No
2:30:00 AM	74	59	No
2:45:00 AM	74	59	No
3:00:00 AM	78	59	No
3:15:00 AM	75	59	No
3:30:00 AM	72	59	No
3:45:00 AM	72	59	No
4:00:00 AM	73	59	No
4:15:00 AM	74	59	No
4:30:00 AM	76	59	No
4:45:00 AM	78	59	No
5:00:00 AM	77	59	No
5:15:00 AM	80	59	No
5:30:00 AM	80	59	No
5:45:00 AM	81	59	No
6:00:00 AM	81	59	No
6:15:00 AM	81	59	No
6:30:00 AM	82	59	No
6:45:00 AM	83	59	No
7:00:00 AM	82	59	No
7:15:00 AM	83	59	No
7:30:00 AM	84	59	No
7:45:00 AM	84	59	No
8:00:00 AM	83	59	No
8:15:00 AM	83	59	No
8:30:00 AM	83	59	No
8:45:00 AM	84	59	No
9:00:00 AM	83	59	No
9:15:00 AM	84	59	No
9:30:00 AM	83	59	No
9:45:00 AM	82	59	No
10:00:00 AM	86	59	No
10:15:00 AM	83	59	No
10:30:00 AM	82	59	No
10:45:00 AM	83	59	No
11:00:00 AM	81	59	No
11:15:00 AM	81	59	No
11:30:00 AM	82	59	No
11:45:00 AM	82	59	No
12:00:00 PM	85	59	No
12:15:00 PM	82	59	No
12:30:00 PM	81	59	No
12:45:00 PM	81	59	No
1:00:00 PM	83	59	No
1:15:00 PM	83	59	No
1:30:00 PM	82	59	No
1:45:00 PM	82	59	No
2:00:00 PM	83	59	No

RD4 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	81	59	No
2:30:00 PM	83	59	No
2:45:00 PM	84	59	No
3:00:00 PM	82	59	No
3:15:00 PM	81	59	No
3:30:00 PM	83	59	No
3:45:00 PM	82	59	No
4:00:00 PM	83	59	No
4:15:00 PM	81	59	No
4:30:00 PM	81	59	No
4:45:00 PM	81	59	No
5:00:00 PM	82	59	No
5:15:00 PM	82	59	No
5:30:00 PM	81	59	No
5:45:00 PM	82	59	No
6:00:00 PM	83	59	No
6:15:00 PM	79	59	No
6:30:00 PM	80	59	No
6:45:00 PM	79	59	No
7:00:00 PM	81	59	No
7:15:00 PM	81	59	No
7:30:00 PM	80	59	No
7:45:00 PM	80	59	No
8:00:00 PM	80	59	No
8:15:00 PM	80	59	No
8:30:00 PM	80	59	No
8:45:00 PM	79	59	No
9:00:00 PM	79	59	No
9:15:00 PM	80	59	No
9:30:00 PM	82	59	No
9:45:00 PM	78	59	No
10:00:00 PM	88	59	No
10:15:00 PM	79	59	No
10:30:00 PM	84	59	No
10:45:00 PM	78	59	No
11:00:00 PM	78	59	No
11:15:00 PM	78	59	No
11:30:00 PM	77	59	No
11:45:00 PM	77	59	No

RD4 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	76	59	No
12:15:00 AM	77	59	No
12:30:00 AM	76	59	No
12:45:00 AM	75	59	No
1:00:00 AM	74	59	No
1:15:00 AM	74	59	No
1:30:00 AM	75	59	No
1:45:00 AM	73	59	No
2:00:00 AM	73	59	No
2:15:00 AM	76	59	No
2:30:00 AM	73	59	No
2:45:00 AM	74	59	No
3:00:00 AM	75	59	No
3:15:00 AM	75	59	No
3:30:00 AM	74	59	No
3:45:00 AM	71	59	No
4:00:00 AM	70	59	No
4:15:00 AM	70	59	No
4:30:00 AM	71	59	No
4:45:00 AM	74	59	No
5:00:00 AM	69	59	No
5:15:00 AM	69	59	No
5:30:00 AM	72	59	No
5:45:00 AM	72	59	No
6:00:00 AM	71	59	No
6:15:00 AM	73	59	No
6:30:00 AM	74	59	No
6:45:00 AM	75	59	No
7:00:00 AM	76	59	No
7:15:00 AM	76	59	No
7:30:00 AM	76	59	No
7:45:00 AM	76	59	No
8:00:00 AM	77	59	No
8:15:00 AM	77	59	No
8:30:00 AM	77	59	No
8:45:00 AM	77	59	No
9:00:00 AM	78	59	No
9:15:00 AM	77	59	No
9:30:00 AM	77	59	No
9:45:00 AM	79	59	No
10:00:00 AM	78	59	No
10:15:00 AM	78	59	No
10:30:00 AM	78	59	No
10:45:00 AM	78	59	No
11:00:00 AM	78	59	No
11:15:00 AM	78	59	No
11:30:00 AM	78	59	No
11:45:00 AM	83	59	No
12:00:00 PM	78	59	No
12:15:00 PM	78	59	No
12:30:00 PM	79	59	No
12:45:00 PM	79	59	No
1:00:00 PM	79	59	No
1:15:00 PM	78	59	No
1:30:00 PM	78	59	No
1:45:00 PM	78	59	No
2:00:00 PM	78	59	No

RD4 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	79	59	No
2:30:00 PM	78	59	No
2:45:00 PM	79	59	No
3:00:00 PM	81	59	No
3:15:00 PM	78	59	No
3:30:00 PM	78	59	No
3:45:00 PM	77	59	No
4:00:00 PM	83	59	No
4:15:00 PM	77	59	No
4:30:00 PM	79	59	No
4:45:00 PM	81	59	No
5:00:00 PM	78	59	No
5:15:00 PM	77	59	No
5:30:00 PM	78	59	No
5:45:00 PM	79	59	No
6:00:00 PM	77	59	No
6:15:00 PM	78	59	No
6:30:00 PM	77	59	No
6:45:00 PM	78	59	No
7:00:00 PM	79	59	No
7:15:00 PM	80	59	No
7:30:00 PM	80	59	No
7:45:00 PM	79	59	No
8:00:00 PM	79	59	No
8:15:00 PM	79	59	No
8:30:00 PM	79	59	No
8:45:00 PM	79	59	No
9:00:00 PM	79	59	No
9:15:00 PM	79	59	No
9:30:00 PM	78	59	No
9:45:00 PM	79	59	No
10:00:00 PM	78	59	No
10:15:00 PM	78	59	No
10:30:00 PM	78	59	No
10:45:00 PM	78	59	No
11:00:00 PM	77	59	No
11:15:00 PM	78	59	No
11:30:00 PM	78	59	No
11:45:00 PM	80	59	No

RD5 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	61	47	No
12:15:00 AM	64	47	No
12:30:00 AM	60	47	No
12:45:00 AM	62	47	No
1:00:00 AM	60	47	No
1:15:00 AM	58	47	No
1:30:00 AM	58	47	No
1:45:00 AM	60	47	No
2:00:00 AM	58	47	No
2:15:00 AM	58	47	No
2:30:00 AM	59	47	No
2:45:00 AM	59	47	No
3:00:00 AM	57	47	No
3:15:00 AM	55	47	No
3:30:00 AM	55	47	No
3:45:00 AM	55	47	No
4:00:00 AM	55	47	No
4:15:00 AM	55	47	No
4:30:00 AM	56	47	No
4:45:00 AM	56	47	No
5:00:00 AM	56	47	No
5:15:00 AM	60	47	No
5:30:00 AM	59	47	No
5:45:00 AM	62	47	No
6:00:00 AM	60	47	No
6:15:00 AM	60	47	No
6:30:00 AM	63	47	No
6:45:00 AM	64	47	No
7:00:00 AM	62	47	No
7:15:00 AM	63	47	No
7:30:00 AM	63	47	No
7:45:00 AM	63	47	No
8:00:00 AM	66	47	No
8:15:00 AM	65	47	No
8:30:00 AM	69	47	No
8:45:00 AM	66	47	No
9:00:00 AM	69	47	No
9:15:00 AM	73	47	No
9:30:00 AM	67	47	No
9:45:00 AM	66	47	No
10:00:00 AM	68	47	No
10:15:00 AM	68	47	No
10:30:00 AM	66	47	No
10:45:00 AM	68	47	No
11:00:00 AM	66	47	No
11:15:00 AM	70	47	No
11:30:00 AM	68	47	No
11:45:00 AM	66	47	No
12:00:00 PM	66	47	No
12:15:00 PM	66	47	No
12:30:00 PM	68	47	No
12:45:00 PM	66	47	No
1:00:00 PM	66	47	No
1:15:00 PM	68	47	No
1:30:00 PM	68	47	No
1:45:00 PM	73	47	No
2:00:00 PM	67	47	No

RDS Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	67	47	No
2:30:00 PM	66	47	No
2:45:00 PM	67	47	No
3:00:00 PM	67	47	No
3:15:00 PM	66	47	No
3:30:00 PM	68	47	No
3:45:00 PM	68	47	No
4:00:00 PM	73	47	No
4:15:00 PM	72	47	No
4:30:00 PM	74	47	No
4:45:00 PM	74	47	No
5:00:00 PM	77	47	No
5:15:00 PM	70	47	No
5:30:00 PM	71	47	No
5:45:00 PM	67	47	No
6:00:00 PM	68	47	No
6:15:00 PM	68	47	No
6:30:00 PM	82	47	No
6:45:00 PM	72	47	No
7:00:00 PM	65	47	No
7:15:00 PM	65	47	No
7:30:00 PM	67	47	No
7:45:00 PM	65	47	No
8:00:00 PM	72	47	No
8:15:00 PM	67	47	No
8:30:00 PM	67	47	No
8:45:00 PM	66	47	No
9:00:00 PM	64	47	No
9:15:00 PM	64	47	No
9:30:00 PM	63	47	No
9:45:00 PM	64	47	No
10:00:00 PM	63	47	No
10:15:00 PM	64	47	No
10:30:00 PM	65	47	No
10:45:00 PM	62	47	No
11:00:00 PM	62	47	No
11:15:00 PM	62	47	No
11:30:00 PM	62	47	No
11:45:00 PM	63	47	No

RDS Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	62	47	No
12:15:00 AM	68	47	No
12:30:00 AM	63	47	No
12:45:00 AM	60	47	No
1:00:00 AM	60	47	No
1:15:00 AM	60	47	No
1:30:00 AM	60	47	No
1:45:00 AM	59	47	No
2:00:00 AM	59	47	No
2:15:00 AM	62	47	No
2:30:00 AM	59	47	No
2:45:00 AM	63	47	No
3:00:00 AM	60	47	No
3:15:00 AM	62	47	No
3:30:00 AM	59	47	No
3:45:00 AM	59	47	No
4:00:00 AM	58	47	No
4:15:00 AM	56	47	No
4:30:00 AM	57	47	No
4:45:00 AM	58	47	No
5:00:00 AM	57	47	No
5:15:00 AM	54	47	No
5:30:00 AM	56	47	No
5:45:00 AM	57	47	No
6:00:00 AM	55	47	No
6:15:00 AM	57	47	No
6:30:00 AM	59	47	No
6:45:00 AM	61	47	No
7:00:00 AM	61	47	No
7:15:00 AM	61	47	No
7:30:00 AM	61	47	No
7:45:00 AM	62	47	No
8:00:00 AM	63	47	No
8:15:00 AM	64	47	No
8:30:00 AM	63	47	No
8:45:00 AM	62	47	No
9:00:00 AM	62	47	No
9:15:00 AM	62	47	No
9:30:00 AM	62	47	No
9:45:00 AM	64	47	No
10:00:00 AM	65	47	No
10:15:00 AM	64	47	No
10:30:00 AM	64	47	No
10:45:00 AM	64	47	No
11:00:00 AM	64	47	No
11:15:00 AM	64	47	No
11:30:00 AM	64	47	No
11:45:00 AM	69	47	No
12:00:00 PM	63	47	No
12:15:00 PM	66	47	No
12:30:00 PM	65	47	No
12:45:00 PM	66	47	No
1:00:00 PM	64	47	No
1:15:00 PM	64	47	No
1:30:00 PM	65	47	No
1:45:00 PM	64	47	No
2:00:00 PM	65	47	No

RDS Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	64	47	No
2:30:00 PM	64	47	No
2:45:00 PM	65	47	No
3:00:00 PM	72	47	No
3:15:00 PM	64	47	No
3:30:00 PM	66	47	No
3:45:00 PM	64	47	No
4:00:00 PM	72	47	No
4:15:00 PM	64	47	No
4:30:00 PM	68	47	No
4:45:00 PM	70	47	No
5:00:00 PM	65	47	No
5:15:00 PM	65	47	No
5:30:00 PM	65	47	No
5:45:00 PM	65	47	No
6:00:00 PM	64	47	No
6:15:00 PM	64	47	No
6:30:00 PM	65	47	No
6:45:00 PM	65	47	No
7:00:00 PM	67	47	No
7:15:00 PM	65	47	No
7:30:00 PM	67	47	No
7:45:00 PM	65	47	No
8:00:00 PM	66	47	No
8:15:00 PM	65	47	No
8:30:00 PM	66	47	No
8:45:00 PM	64	47	No
9:00:00 PM	65	47	No
9:15:00 PM	65	47	No
9:30:00 PM	65	47	No
9:45:00 PM	64	47	No
10:00:00 PM	64	47	No
10:15:00 PM	65	47	No
10:30:00 PM	64	47	No
10:45:00 PM	63	47	No
11:00:00 PM	62	47	No
11:15:00 PM	63	47	No
11:30:00 PM	62	47	No
11:45:00 PM	64	47	No

RD6 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	71	49	No
12:15:00 AM	72	49	No
12:30:00 AM	69	49	No
12:45:00 AM	71	49	No
1:00:00 AM	69	49	No
1:15:00 AM	66	49	No
1:30:00 AM	66	49	No
1:45:00 AM	66	49	No
2:00:00 AM	72	49	No
2:15:00 AM	69	49	No
2:30:00 AM	71	49	No
2:45:00 AM	62	49	No
3:00:00 AM	71	49	No
3:15:00 AM	64	49	No
3:30:00 AM	62	49	No
3:45:00 AM	70	49	No
4:00:00 AM	64	49	No
4:15:00 AM	68	49	No
4:30:00 AM	67	49	No
4:45:00 AM	68	49	No
5:00:00 AM	71	49	No
5:15:00 AM	72	49	No
5:30:00 AM	73	49	No
5:45:00 AM	71	49	No
6:00:00 AM	74	49	No
6:15:00 AM	76	49	No
6:30:00 AM	78	49	No
6:45:00 AM	75	49	No
7:00:00 AM	76	49	No
7:15:00 AM	81	49	No
7:30:00 AM	76	49	No
7:45:00 AM	76	49	No
8:00:00 AM	77	49	No
8:15:00 AM	75	49	No
8:30:00 AM	75	49	No
8:45:00 AM	80	49	No
9:00:00 AM	76	49	No
9:15:00 AM	79	49	No
9:30:00 AM	76	49	No
9:45:00 AM	75	49	No
10:00:00 AM	77	49	No
10:15:00 AM	75	49	No
10:30:00 AM	75	49	No
10:45:00 AM	75	49	No
11:00:00 AM	77	49	No
11:15:00 AM	76	49	No
11:30:00 AM	75	49	No
11:45:00 AM	76	49	No
12:00:00 PM	76	49	No
12:15:00 PM	76	49	No
12:30:00 PM	76	49	No
12:45:00 PM	77	49	No
1:00:00 PM	76	49	No
1:15:00 PM	76	49	No
1:30:00 PM	74	49	No
1:45:00 PM	77	49	No
2:00:00 PM	74	49	No

RD6 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	75	49	No
2:30:00 PM	74	49	No
2:45:00 PM	75	49	No
3:00:00 PM	78	49	No
3:15:00 PM	75	49	No
3:30:00 PM	75	49	No
3:45:00 PM	75	49	No
4:00:00 PM	77	49	No
4:15:00 PM	76	49	No
4:30:00 PM	74	49	No
4:45:00 PM	76	49	No
5:00:00 PM	74	49	No
5:15:00 PM	76	49	No
5:30:00 PM	76	49	No
5:45:00 PM	77	49	No
6:00:00 PM	78	49	No
6:15:00 PM	76	49	No
6:30:00 PM	83	49	No
6:45:00 PM	78	49	No
7:00:00 PM	75	49	No
7:15:00 PM	75	49	No
7:30:00 PM	76	49	No
7:45:00 PM	77	49	No
8:00:00 PM	85	49	No
8:15:00 PM	75	49	No
8:30:00 PM	76	49	No
8:45:00 PM	76	49	No
9:00:00 PM	75	49	No
9:15:00 PM	76	49	No
9:30:00 PM	75	49	No
9:45:00 PM	80	49	No
10:00:00 PM	74	49	No
10:15:00 PM	75	49	No
10:30:00 PM	76	49	No
10:45:00 PM	74	49	No
11:00:00 PM	71	49	No
11:15:00 PM	73	49	No
11:30:00 PM	70	49	No
11:45:00 PM	76	49	No

RD6 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	70	49	No
12:15:00 AM	73	49	No
12:30:00 AM	74	49	No
12:45:00 AM	71	49	No
1:00:00 AM	68	49	No
1:15:00 AM	69	49	No
1:30:00 AM	77	49	No
1:45:00 AM	67	49	No
2:00:00 AM	74	49	No
2:15:00 AM	80	49	No
2:30:00 AM	72	49	No
2:45:00 AM	73	49	No
3:00:00 AM	78	49	No
3:15:00 AM	78	49	No
3:30:00 AM	73	49	No
3:45:00 AM	69	49	No
4:00:00 AM	75	49	No
4:15:00 AM	72	49	No
4:30:00 AM	72	49	No
4:45:00 AM	72	49	No
5:00:00 AM	62	49	No
5:15:00 AM	64	49	No
5:30:00 AM	66	49	No
5:45:00 AM	68	49	No
6:00:00 AM	64	49	No
6:15:00 AM	74	49	No
6:30:00 AM	68	49	No
6:45:00 AM	69	49	No
7:00:00 AM	69	49	No
7:15:00 AM	69	49	No
7:30:00 AM	71	49	No
7:45:00 AM	69	49	No
8:00:00 AM	73	49	No
8:15:00 AM	70	49	No
8:30:00 AM	73	49	No
8:45:00 AM	71	49	No
9:00:00 AM	71	49	No
9:15:00 AM	71	49	No
9:30:00 AM	72	49	No
9:45:00 AM	73	49	No
10:00:00 AM	73	49	No
10:15:00 AM	75	49	No
10:30:00 AM	74	49	No
10:45:00 AM	75	49	No
11:00:00 AM	71	49	No
11:15:00 AM	71	49	No
11:30:00 AM	72	49	No
11:45:00 AM	74	49	No
12:00:00 PM	74	49	No
12:15:00 PM	72	49	No
12:30:00 PM	73	49	No
12:45:00 PM	75	49	No
1:00:00 PM	74	49	No
1:15:00 PM	74	49	No
1:30:00 PM	74	49	No
1:45:00 PM	75	49	No
2:00:00 PM	75	49	No

RD6 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	74	49	No
2:30:00 PM	73	49	No
2:45:00 PM	72	49	No
3:00:00 PM	75	49	No
3:15:00 PM	74	49	No
3:30:00 PM	73	49	No
3:45:00 PM	72	49	No
4:00:00 PM	75	49	No
4:15:00 PM	76	49	No
4:30:00 PM	73	49	No
4:45:00 PM	74	49	No
5:00:00 PM	73	49	No
5:15:00 PM	74	49	No
5:30:00 PM	74	49	No
5:45:00 PM	73	49	No
6:00:00 PM	72	49	No
6:15:00 PM	73	49	No
6:30:00 PM	72	49	No
6:45:00 PM	75	49	No
7:00:00 PM	74	49	No
7:15:00 PM	74	49	No
7:30:00 PM	75	49	No
7:45:00 PM	74	49	No
8:00:00 PM	74	49	No
8:15:00 PM	75	49	No
8:30:00 PM	75	49	No
8:45:00 PM	76	49	No
9:00:00 PM	76	49	No
9:15:00 PM	76	49	No
9:30:00 PM	75	49	No
9:45:00 PM	75	49	No
10:00:00 PM	77	49	No
10:15:00 PM	76	49	No
10:30:00 PM	73	49	No
10:45:00 PM	75	49	No
11:00:00 PM	73	49	No
11:15:00 PM	75	49	No
11:30:00 PM	72	49	No
11:45:00 PM	73	49	No

RD7 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	76	59	No
12:15:00 AM	80	59	No
12:30:00 AM	75	59	No
12:45:00 AM	75	59	No
1:00:00 AM	76	59	No
1:15:00 AM	73	59	No
1:30:00 AM	71	59	No
1:45:00 AM	79	59	No
2:00:00 AM	73	59	No
2:15:00 AM	73	59	No
2:30:00 AM	72	59	No
2:45:00 AM	69	59	No
3:00:00 AM	73	59	No
3:15:00 AM	69	59	No
3:30:00 AM	68	59	No
3:45:00 AM	73	59	No
4:00:00 AM	70	59	No
4:15:00 AM	72	59	No
4:30:00 AM	73	59	No
4:45:00 AM	74	59	No
5:00:00 AM	75	59	No
5:15:00 AM	75	59	No
5:30:00 AM	77	59	No
5:45:00 AM	77	59	No
6:00:00 AM	79	59	No
6:15:00 AM	79	59	No
6:30:00 AM	82	59	No
6:45:00 AM	83	59	No
7:00:00 AM	81	59	No
7:15:00 AM	83	59	No
7:30:00 AM	82	59	No
7:45:00 AM	82	59	No
8:00:00 AM	83	59	No
8:15:00 AM	83	59	No
8:30:00 AM	81	59	No
8:45:00 AM	81	59	No
9:00:00 AM	82	59	No
9:15:00 AM	92	59	No
9:30:00 AM	81	59	No
9:45:00 AM	81	59	No
10:00:00 AM	82	59	No
10:15:00 AM	82	59	No
10:30:00 AM	81	59	No
10:45:00 AM	81	59	No
11:00:00 AM	81	59	No
11:15:00 AM	81	59	No
11:30:00 AM	80	59	No
11:45:00 AM	81	59	No
12:00:00 PM	80	59	No
12:15:00 PM	82	59	No
12:30:00 PM	85	59	No
12:45:00 PM	80	59	No
1:00:00 PM	80	59	No
1:15:00 PM	81	59	No
1:30:00 PM	82	59	No
1:45:00 PM	89	59	No
2:00:00 PM	80	59	No

RD7 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	80	59	No
2:30:00 PM	80	59	No
2:45:00 PM	81	59	No
3:00:00 PM	82	59	No
3:15:00 PM	81	59	No
3:30:00 PM	81	59	No
3:45:00 PM	81	59	No
4:00:00 PM	81	59	No
4:15:00 PM	81	59	No
4:30:00 PM	81	59	No
4:45:00 PM	82	59	No
5:00:00 PM	80	59	No
5:15:00 PM	85	59	No
5:30:00 PM	85	59	No
5:45:00 PM	86	59	No
6:00:00 PM	84	59	No
6:15:00 PM	81	59	No
6:30:00 PM	90	59	No
6:45:00 PM	88	59	No
7:00:00 PM	80	59	No
7:15:00 PM	81	59	No
7:30:00 PM	82	59	No
7:45:00 PM	81	59	No
8:00:00 PM	89	59	No
8:15:00 PM	80	59	No
8:30:00 PM	80	59	No
8:45:00 PM	80	59	No
9:00:00 PM	80	59	No
9:15:00 PM	80	59	No
9:30:00 PM	80	59	No
9:45:00 PM	81	59	No
10:00:00 PM	78	59	No
10:15:00 PM	79	59	No
10:30:00 PM	81	59	No
10:45:00 PM	77	59	No
11:00:00 PM	78	59	No
11:15:00 PM	79	59	No
11:30:00 PM	76	59	No
11:45:00 PM	78	59	No

RD7 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	76	59	No
12:15:00 AM	82	59	No
12:30:00 AM	77	59	No
12:45:00 AM	75	59	No
1:00:00 AM	75	59	No
1:15:00 AM	75	59	No
1:30:00 AM	74	59	No
1:45:00 AM	73	59	No
2:00:00 AM	73	59	No
2:15:00 AM	80	59	No
2:30:00 AM	72	59	No
2:45:00 AM	73	59	No
3:00:00 AM	75	59	No
3:15:00 AM	77	59	No
3:30:00 AM	75	59	No
3:45:00 AM	71	59	No
4:00:00 AM	72	59	No
4:15:00 AM	69	59	No
4:30:00 AM	71	59	No
4:45:00 AM	72	59	No
5:00:00 AM	69	59	No
5:15:00 AM	68	59	No
5:30:00 AM	71	59	No
5:45:00 AM	71	59	No
6:00:00 AM	70	59	No
6:15:00 AM	73	59	No
6:30:00 AM	74	59	No
6:45:00 AM	74	59	No
7:00:00 AM	75	59	No
7:15:00 AM	75	59	No
7:30:00 AM	76	59	No
7:45:00 AM	76	59	No
8:00:00 AM	77	59	No
8:15:00 AM	77	59	No
8:30:00 AM	77	59	No
8:45:00 AM	77	59	No
9:00:00 AM	78	59	No
9:15:00 AM	77	59	No
9:30:00 AM	77	59	No
9:45:00 AM	79	59	No
10:00:00 AM	77	59	No
10:15:00 AM	78	59	No
10:30:00 AM	78	59	No
10:45:00 AM	78	59	No
11:00:00 AM	78	59	No
11:15:00 AM	78	59	No
11:30:00 AM	78	59	No
11:45:00 AM	85	59	No
12:00:00 PM	78	59	No
12:15:00 PM	78	59	No
12:30:00 PM	80	59	No
12:45:00 PM	79	59	No
1:00:00 PM	79	59	No
1:15:00 PM	79	59	No
1:30:00 PM	79	59	No
1:45:00 PM	79	59	No
2:00:00 PM	79	59	No

RD7 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	78	59	No
2:30:00 PM	79	59	No
2:45:00 PM	78	59	No
3:00:00 PM	88	59	No
3:15:00 PM	78	59	No
3:30:00 PM	78	59	No
3:45:00 PM	78	59	No
4:00:00 PM	82	59	No
4:15:00 PM	78	59	No
4:30:00 PM	79	59	No
4:45:00 PM	82	59	No
5:00:00 PM	79	59	No
5:15:00 PM	78	59	No
5:30:00 PM	78	59	No
5:45:00 PM	79	59	No
6:00:00 PM	78	59	No
6:15:00 PM	78	59	No
6:30:00 PM	78	59	No
6:45:00 PM	77	59	No
7:00:00 PM	80	59	No
7:15:00 PM	80	59	No
7:30:00 PM	79	59	No
7:45:00 PM	80	59	No
8:00:00 PM	80	59	No
8:15:00 PM	80	59	No
8:30:00 PM	82	59	No
8:45:00 PM	79	59	No
9:00:00 PM	80	59	No
9:15:00 PM	79	59	No
9:30:00 PM	78	59	No
9:45:00 PM	80	59	No
10:00:00 PM	78	59	No
10:15:00 PM	79	59	No
10:30:00 PM	79	59	No
10:45:00 PM	79	59	No
11:00:00 PM	77	59	No
11:15:00 PM	77	59	No
11:30:00 PM	77	59	No
11:45:00 PM	82	59	No

RD8 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	66	49	No
12:15:00 AM	70	49	No
12:30:00 AM	65	49	No
12:45:00 AM	65	49	No
1:00:00 AM	65	49	No
1:15:00 AM	62	49	No
1:30:00 AM	62	49	No
1:45:00 AM	64	49	No
2:00:00 AM	61	49	No
2:15:00 AM	62	49	No
2:30:00 AM	62	49	No
2:45:00 AM	61	49	No
3:00:00 AM	61	49	No
3:15:00 AM	60	49	No
3:30:00 AM	59	49	No
3:45:00 AM	62	49	No
4:00:00 AM	61	49	No
4:15:00 AM	62	49	No
4:30:00 AM	65	49	No
4:45:00 AM	64	49	No
5:00:00 AM	66	49	No
5:15:00 AM	66	49	No
5:30:00 AM	67	49	No
5:45:00 AM	67	49	No
6:00:00 AM	68	49	No
6:15:00 AM	69	49	No
6:30:00 AM	72	49	No
6:45:00 AM	73	49	No
7:00:00 AM	70	49	No
7:15:00 AM	80	49	No
7:30:00 AM	71	49	No
7:45:00 AM	72	49	No
8:00:00 AM	73	49	No
8:15:00 AM	73	49	No
8:30:00 AM	72	49	No
8:45:00 AM	72	49	No
9:00:00 AM	73	49	No
9:15:00 AM	79	49	No
9:30:00 AM	73	49	No
9:45:00 AM	71	49	No
10:00:00 AM	73	49	No
10:15:00 AM	74	49	No
10:30:00 AM	72	49	No
10:45:00 AM	71	49	No
11:00:00 AM	72	49	No
11:15:00 AM	73	49	No
11:30:00 AM	75	49	No
11:45:00 AM	72	49	No
12:00:00 PM	72	49	No
12:15:00 PM	73	49	No
12:30:00 PM	73	49	No
12:45:00 PM	73	49	No
1:00:00 PM	72	49	No
1:15:00 PM	72	49	No
1:30:00 PM	75	49	No
1:45:00 PM	78	49	No
2:00:00 PM	71	49	No

RD8 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	71	49	No
2:30:00 PM	71	49	No
2:45:00 PM	71	49	No
3:00:00 PM	72	49	No
3:15:00 PM	73	49	No
3:30:00 PM	72	49	No
3:45:00 PM	71	49	No
4:00:00 PM	72	49	No
4:15:00 PM	71	49	No
4:30:00 PM	71	49	No
4:45:00 PM	72	49	No
5:00:00 PM	73	49	No
5:15:00 PM	74	49	No
5:30:00 PM	77	49	No
5:45:00 PM	74	49	No
6:00:00 PM	74	49	No
6:15:00 PM	71	49	No
6:30:00 PM	88	49	No
6:45:00 PM	78	49	No
7:00:00 PM	71	49	No
7:15:00 PM	71	49	No
7:30:00 PM	73	49	No
7:45:00 PM	71	49	No
8:00:00 PM	78	49	No
8:15:00 PM	70	49	No
8:30:00 PM	69	49	No
8:45:00 PM	70	49	No
9:00:00 PM	69	49	No
9:15:00 PM	69	49	No
9:30:00 PM	69	49	No
9:45:00 PM	70	49	No
10:00:00 PM	68	49	No
10:15:00 PM	68	49	No
10:30:00 PM	70	49	No
10:45:00 PM	67	49	No
11:00:00 PM	67	49	No
11:15:00 PM	69	49	No
11:30:00 PM	67	49	No
11:45:00 PM	69	49	No

RD8 Elevated Receiver			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	66	47	No
12:15:00 AM	70	47	No
12:30:00 AM	66	47	No
12:45:00 AM	65	47	No
1:00:00 AM	65	47	No
1:15:00 AM	62	47	No
1:30:00 AM	62	47	No
1:45:00 AM	64	47	No
2:00:00 AM	62	47	No
2:15:00 AM	62	47	No
2:30:00 AM	62	47	No
2:45:00 AM	61	47	No
3:00:00 AM	61	47	No
3:15:00 AM	60	47	No
3:30:00 AM	59	47	No
3:45:00 AM	62	47	No
4:00:00 AM	62	47	No
4:15:00 AM	62	47	No
4:30:00 AM	65	47	No
4:45:00 AM	64	47	No
5:00:00 AM	66	47	No
5:15:00 AM	66	47	No
5:30:00 AM	67	47	No
5:45:00 AM	67	47	No
6:00:00 AM	68	47	No
6:15:00 AM	69	47	No
6:30:00 AM	72	47	No
6:45:00 AM	73	47	No
7:00:00 AM	71	47	No
7:15:00 AM	80	47	No
7:30:00 AM	71	47	No
7:45:00 AM	72	47	No
8:00:00 AM	73	47	No
8:15:00 AM	73	47	No
8:30:00 AM	72	47	No
8:45:00 AM	72	47	No
9:00:00 AM	73	47	No
9:15:00 AM	79	47	No
9:30:00 AM	73	47	No
9:45:00 AM	72	47	No
10:00:00 AM	73	47	No
10:15:00 AM	75	47	No
10:30:00 AM	72	47	No
10:45:00 AM	72	47	No
11:00:00 AM	73	47	No
11:15:00 AM	73	47	No
11:30:00 AM	75	47	No
11:45:00 AM	72	47	No
12:00:00 PM	72	47	No
12:15:00 PM	73	47	No
12:30:00 PM	73	47	No
12:45:00 PM	73	47	No
1:00:00 PM	72	47	No
1:15:00 PM	72	47	No
1:30:00 PM	75	47	No
1:45:00 PM	78	47	No
2:00:00 PM	71	47	No

RD8 Elevated Receiver			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	72	47	No
2:30:00 PM	71	47	No
2:45:00 PM	71	47	No
3:00:00 PM	72	47	No
3:15:00 PM	74	47	No
3:30:00 PM	72	47	No
3:45:00 PM	72	47	No
4:00:00 PM	72	47	No
4:15:00 PM	71	47	No
4:30:00 PM	72	47	No
4:45:00 PM	72	47	No
5:00:00 PM	73	47	No
5:15:00 PM	74	47	No
5:30:00 PM	77	47	No
5:45:00 PM	74	47	No
6:00:00 PM	74	47	No
6:15:00 PM	71	47	No
6:30:00 PM	88	47	No
6:45:00 PM	78	47	No
7:00:00 PM	71	47	No
7:15:00 PM	72	47	No
7:30:00 PM	73	47	No
7:45:00 PM	71	47	No
8:00:00 PM	78	47	No
8:15:00 PM	70	47	No
8:30:00 PM	70	47	No
8:45:00 PM	71	47	No
9:00:00 PM	70	47	No
9:15:00 PM	69	47	No
9:30:00 PM	69	47	No
9:45:00 PM	70	47	No
10:00:00 PM	68	47	No
10:15:00 PM	69	47	No
10:30:00 PM	70	47	No
10:45:00 PM	67	47	No
11:00:00 PM	67	47	No
11:15:00 PM	69	47	No
11:30:00 PM	67	47	No
11:45:00 PM	70	47	No

RD8 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	66	49	No
12:15:00 AM	72	49	No
12:30:00 AM	67	49	No
12:45:00 AM	65	49	No
1:00:00 AM	64	49	No
1:15:00 AM	64	49	No
1:30:00 AM	65	49	No
1:45:00 AM	63	49	No
2:00:00 AM	63	49	No
2:15:00 AM	67	49	No
2:30:00 AM	63	49	No
2:45:00 AM	67	49	No
3:00:00 AM	65	49	No
3:15:00 AM	66	49	No
3:30:00 AM	64	49	No
3:45:00 AM	63	49	No
4:00:00 AM	62	49	No
4:15:00 AM	61	49	No
4:30:00 AM	61	49	No
4:45:00 AM	63	49	No
5:00:00 AM	61	49	No
5:15:00 AM	58	49	No
5:30:00 AM	61	49	No
5:45:00 AM	61	49	No
6:00:00 AM	60	49	No
6:15:00 AM	62	49	No
6:30:00 AM	64	49	No
6:45:00 AM	66	49	No
7:00:00 AM	65	49	No
7:15:00 AM	65	49	No
7:30:00 AM	65	49	No
7:45:00 AM	66	49	No
8:00:00 AM	68	49	No
8:15:00 AM	68	49	No
8:30:00 AM	68	49	No
8:45:00 AM	67	49	No
9:00:00 AM	67	49	No
9:15:00 AM	66	49	No
9:30:00 AM	67	49	No
9:45:00 AM	68	49	No
10:00:00 AM	69	49	No
10:15:00 AM	68	49	No
10:30:00 AM	69	49	No
10:45:00 AM	68	49	No
11:00:00 AM	68	49	No
11:15:00 AM	68	49	No
11:30:00 AM	68	49	No
11:45:00 AM	73	49	No
12:00:00 PM	68	49	No
12:15:00 PM	70	49	No
12:30:00 PM	69	49	No
12:45:00 PM	70	49	No
1:00:00 PM	69	49	No
1:15:00 PM	69	49	No
1:30:00 PM	69	49	No
1:45:00 PM	68	49	No
2:00:00 PM	70	49	No

RD8 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	69	49	No
2:30:00 PM	68	49	No
2:45:00 PM	69	49	No
3:00:00 PM	76	49	No
3:15:00 PM	69	49	No
3:30:00 PM	68	49	No
3:45:00 PM	68	49	No
4:00:00 PM	76	49	No
4:15:00 PM	68	49	No
4:30:00 PM	69	49	No
4:45:00 PM	75	49	No
5:00:00 PM	69	49	No
5:15:00 PM	68	49	No
5:30:00 PM	69	49	No
5:45:00 PM	69	49	No
6:00:00 PM	68	49	No
6:15:00 PM	69	49	No
6:30:00 PM	69	49	No
6:45:00 PM	68	49	No
7:00:00 PM	71	49	No
7:15:00 PM	70	49	No
7:30:00 PM	70	49	No
7:45:00 PM	70	49	No
8:00:00 PM	73	49	No
8:15:00 PM	70	49	No
8:30:00 PM	71	49	No
8:45:00 PM	69	49	No
9:00:00 PM	69	49	No
9:15:00 PM	69	49	No
9:30:00 PM	68	49	No
9:45:00 PM	69	49	No
10:00:00 PM	68	49	No
10:15:00 PM	69	49	No
10:30:00 PM	68	49	No
10:45:00 PM	68	49	No
11:00:00 PM	67	49	No
11:15:00 PM	67	49	No
11:30:00 PM	67	49	No
11:45:00 PM	68	49	No

RD8 Weekends Elevated Receivers			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	67	47	No
12:15:00 AM	73	47	No
12:30:00 AM	67	47	No
12:45:00 AM	65	47	No
1:00:00 AM	65	47	No
1:15:00 AM	65	47	No
1:30:00 AM	65	47	No
1:45:00 AM	63	47	No
2:00:00 AM	64	47	No
2:15:00 AM	67	47	No
2:30:00 AM	64	47	No
2:45:00 AM	68	47	No
3:00:00 AM	65	47	No
3:15:00 AM	66	47	No
3:30:00 AM	64	47	No
3:45:00 AM	63	47	No
4:00:00 AM	62	47	No
4:15:00 AM	61	47	No
4:30:00 AM	62	47	No
4:45:00 AM	63	47	No
5:00:00 AM	61	47	No
5:15:00 AM	59	47	No
5:30:00 AM	61	47	No
5:45:00 AM	62	47	No
6:00:00 AM	60	47	No
6:15:00 AM	62	47	No
6:30:00 AM	64	47	No
6:45:00 AM	66	47	No
7:00:00 AM	66	47	No
7:15:00 AM	65	47	No
7:30:00 AM	66	47	No
7:45:00 AM	66	47	No
8:00:00 AM	68	47	No
8:15:00 AM	68	47	No
8:30:00 AM	68	47	No
8:45:00 AM	67	47	No
9:00:00 AM	67	47	No
9:15:00 AM	67	47	No
9:30:00 AM	67	47	No
9:45:00 AM	69	47	No
10:00:00 AM	69	47	No
10:15:00 AM	69	47	No
10:30:00 AM	69	47	No
10:45:00 AM	69	47	No
11:00:00 AM	68	47	No
11:15:00 AM	68	47	No
11:30:00 AM	68	47	No
11:45:00 AM	73	47	No
12:00:00 PM	68	47	No
12:15:00 PM	70	47	No
12:30:00 PM	70	47	No
12:45:00 PM	70	47	No
1:00:00 PM	69	47	No
1:15:00 PM	69	47	No
1:30:00 PM	70	47	No
1:45:00 PM	68	47	No
2:00:00 PM	70	47	No

RDB Weekends Elevated Receivers			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	68.8	47	No
2:30:00 PM	68.6	47	No
2:45:00 PM	69.2	47	No
3:00:00 PM	76.4	47	No
3:15:00 PM	68.9	47	No
3:30:00 PM	68	47	No
3:45:00 PM	68.3	47	No
4:00:00 PM	76.4	47	No
4:15:00 PM	68.3	47	No
4:30:00 PM	69.1	47	No
4:45:00 PM	75	47	No
5:00:00 PM	69.3	47	No
5:15:00 PM	68.1	47	No
5:30:00 PM	69.1	47	No
5:45:00 PM	69.1	47	No
6:00:00 PM	68.4	47	No
6:15:00 PM	68.8	47	No
6:30:00 PM	69	47	No
6:45:00 PM	68.2	47	No
7:00:00 PM	71	47	No
7:15:00 PM	70	47	No
7:30:00 PM	70.4	47	No
7:45:00 PM	70.1	47	No
8:00:00 PM	73	47	No
8:15:00 PM	69.8	47	No
8:30:00 PM	71.4	47	No
8:45:00 PM	69.2	47	No
9:00:00 PM	69.6	47	No
9:15:00 PM	69.6	47	No
9:30:00 PM	68.6	47	No
9:45:00 PM	69.2	47	No
10:00:00 PM	68.4	47	No
10:15:00 PM	69.5	47	No
10:30:00 PM	68.6	47	No
10:45:00 PM	68.6	47	No
11:00:00 PM	67.1	47	No
11:15:00 PM	67.5	47	No
11:30:00 PM	67.1	47	No
11:45:00 PM	68.6	47	No

RD10 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	69	56	No
12:15:00 AM	68	56	No
12:30:00 AM	65	56	No
12:45:00 AM	65	56	No
1:00:00 AM	64	56	No
1:15:00 AM	67	56	No
1:30:00 AM	59	56	No
1:45:00 AM	63	56	No
2:00:00 AM	61	56	No
2:15:00 AM	60	56	No
2:30:00 AM	60	56	No
2:45:00 AM	58	56	No
3:00:00 AM	60	56	No
3:15:00 AM	57	56	No
3:30:00 AM	59	56	No
3:45:00 AM	61	56	No
4:00:00 AM	60	56	No
4:15:00 AM	61	56	No
4:30:00 AM	62	56	No
4:45:00 AM	63	56	No
5:00:00 AM	63	56	No
5:15:00 AM	63	56	No
5:30:00 AM	64	56	No
5:45:00 AM	66	56	No
6:00:00 AM	66	56	No
6:15:00 AM	67	56	No
6:30:00 AM	69	56	No
6:45:00 AM	71	56	No
7:00:00 AM	70	56	No
7:15:00 AM	72	56	No
7:30:00 AM	73	56	No
7:45:00 AM	71	56	No
8:00:00 AM	72	56	No
8:15:00 AM	73	56	No
8:30:00 AM	71	56	No
8:45:00 AM	71	56	No
9:00:00 AM	71	56	No
9:15:00 AM	78	56	No
9:30:00 AM	72	56	No
9:45:00 AM	73	56	No
10:00:00 AM	73	56	No
10:15:00 AM	73	56	No
10:30:00 AM	74	56	No
10:45:00 AM	74	56	No
11:00:00 AM	74	56	No
11:15:00 AM	73	56	No
11:30:00 AM	75	56	No
11:45:00 AM	72	56	No
12:00:00 PM	72	56	No
12:15:00 PM	72	56	No
12:30:00 PM	85	56	No
12:45:00 PM	73	56	No
1:00:00 PM	73	56	No
1:15:00 PM	72	56	No
1:30:00 PM	72	56	No
1:45:00 PM	75	56	No
2:00:00 PM	72	56	No

RD10 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	74	56	No
2:30:00 PM	74	56	No
2:45:00 PM	74	56	No
3:00:00 PM	73	56	No
3:15:00 PM	71	56	No
3:30:00 PM	74	56	No
3:45:00 PM	72	56	No
4:00:00 PM	72	56	No
4:15:00 PM	72	56	No
4:30:00 PM	74	56	No
4:45:00 PM	72	56	No
5:00:00 PM	72	56	No
5:15:00 PM	74	56	No
5:30:00 PM	75	56	No
5:45:00 PM	74	56	No
6:00:00 PM	75	56	No
6:15:00 PM	71	56	No
6:30:00 PM	86	56	No
6:45:00 PM	76	56	No
7:00:00 PM	73	56	No
7:15:00 PM	72	56	No
7:30:00 PM	71	56	No
7:45:00 PM	71	56	No
8:00:00 PM	74	56	No
8:15:00 PM	69	56	No
8:30:00 PM	69	56	No
8:45:00 PM	68	56	No
9:00:00 PM	70	56	No
9:15:00 PM	69	56	No
9:30:00 PM	70	56	No
9:45:00 PM	69	56	No
10:00:00 PM	68	56	No
10:15:00 PM	68	56	No
10:30:00 PM	70	56	No
10:45:00 PM	69	56	No
11:00:00 PM	67	56	No
11:15:00 PM	69	56	No
11:30:00 PM	66	56	No
11:45:00 PM	65	56	No

RD10 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	65	56	No
12:15:00 AM	65	56	No
12:30:00 AM	65	56	No
12:45:00 AM	64	56	No
1:00:00 AM	63	56	No
1:15:00 AM	66	56	No
1:30:00 AM	64	56	No
1:45:00 AM	63	56	No
2:00:00 AM	64	56	No
2:15:00 AM	76	56	No
2:30:00 AM	62	56	No
2:45:00 AM	64	56	No
3:00:00 AM	66	56	No
3:15:00 AM	64	56	No
3:30:00 AM	66	56	No
3:45:00 AM	62	56	No
4:00:00 AM	63	56	No
4:15:00 AM	61	56	No
4:30:00 AM	61	56	No
4:45:00 AM	63	56	No
5:00:00 AM	57	56	No
5:15:00 AM	57	56	No
5:30:00 AM	58	56	No
5:45:00 AM	58	56	No
6:00:00 AM	58	56	No
6:15:00 AM	60	56	No
6:30:00 AM	62	56	No
6:45:00 AM	62	56	No
7:00:00 AM	63	56	No
7:15:00 AM	63	56	No
7:30:00 AM	63	56	No
7:45:00 AM	64	56	No
8:00:00 AM	67	56	No
8:15:00 AM	68	56	No
8:30:00 AM	68	56	No
8:45:00 AM	66	56	No
9:00:00 AM	68	56	No
9:15:00 AM	65	56	No
9:30:00 AM	66	56	No
9:45:00 AM	67	56	No
10:00:00 AM	67	56	No
10:15:00 AM	67	56	No
10:30:00 AM	67	56	No
10:45:00 AM	67	56	No
11:00:00 AM	69	56	No
11:15:00 AM	67	56	No
11:30:00 AM	68	56	No
11:45:00 AM	70	56	No
12:00:00 PM	68	56	No
12:15:00 PM	68	56	No
12:30:00 PM	70	56	No
12:45:00 PM	70	56	No
1:00:00 PM	71	56	No
1:15:00 PM	70	56	No
1:30:00 PM	68	56	No
1:45:00 PM	69	56	No
2:00:00 PM	69	56	No

RD10 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	69	56	No
2:30:00 PM	68	56	No
2:45:00 PM	70	56	No
3:00:00 PM	69	56	No
3:15:00 PM	68	56	No
3:30:00 PM	69	56	No
3:45:00 PM	68	56	No
4:00:00 PM	69	56	No
4:15:00 PM	68	56	No
4:30:00 PM	69	56	No
4:45:00 PM	75	56	No
5:00:00 PM	68	56	No
5:15:00 PM	69	56	No
5:30:00 PM	68	56	No
5:45:00 PM	68	56	No
6:00:00 PM	67	56	No
6:15:00 PM	68	56	No
6:30:00 PM	67	56	No
6:45:00 PM	67	56	No
7:00:00 PM	69	56	No
7:15:00 PM	69	56	No
7:30:00 PM	71	56	No
7:45:00 PM	69	56	No
8:00:00 PM	69	56	No
8:15:00 PM	68	56	No
8:30:00 PM	68	56	No
8:45:00 PM	75	56	No
9:00:00 PM	69	56	No
9:15:00 PM	68	56	No
9:30:00 PM	68	56	No
9:45:00 PM	71	56	No
10:00:00 PM	68	56	No
10:15:00 PM	70	56	No
10:30:00 PM	68	56	No
10:45:00 PM	68	56	No
11:00:00 PM	66	56	No
11:15:00 PM	66	56	No
11:30:00 PM	66	56	No
11:45:00 PM	67	56	No

RD11 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	77	61	No
12:15:00 AM	78	61	No
12:30:00 AM	75	61	No
12:45:00 AM	74	61	No
1:00:00 AM	76	61	No
1:15:00 AM	74	61	No
1:30:00 AM	73	61	No
1:45:00 AM	77	61	No
2:00:00 AM	73	61	No
2:15:00 AM	73	61	No
2:30:00 AM	74	61	No
2:45:00 AM	72	61	No
3:00:00 AM	72	61	No
3:15:00 AM	71	61	No
3:30:00 AM	69	61	No
3:45:00 AM	75	61	No
4:00:00 AM	70	61	No
4:15:00 AM	72	61	No
4:30:00 AM	74	61	No
4:45:00 AM	75	61	No
5:00:00 AM	75	61	No
5:15:00 AM	77	61	No
5:30:00 AM	77	61	No
5:45:00 AM	78	61	No
6:00:00 AM	79	61	No
6:15:00 AM	79	61	No
6:30:00 AM	80	61	No
6:45:00 AM	81	61	No
7:00:00 AM	82	61	No
7:15:00 AM	82	61	No
7:30:00 AM	82	61	No
7:45:00 AM	82	61	No
8:00:00 AM	82	61	No
8:15:00 AM	82	61	No
8:30:00 AM	81	61	No
8:45:00 AM	81	61	No
9:00:00 AM	81	61	No
9:15:00 AM	91	61	No
9:30:00 AM	81	61	No
9:45:00 AM	81	61	No
10:00:00 AM	81	61	No
10:15:00 AM	81	61	No
10:30:00 AM	80	61	No
10:45:00 AM	80	61	No
11:00:00 AM	81	61	No
11:15:00 AM	80	61	No
11:30:00 AM	80	61	No
11:45:00 AM	81	61	No
12:00:00 PM	79	61	No
12:15:00 PM	81	61	No
12:30:00 PM	81	61	No
12:45:00 PM	81	61	No
1:00:00 PM	80	61	No
1:15:00 PM	81	61	No
1:30:00 PM	86	61	No
1:45:00 PM	87	61	No
2:00:00 PM	81	61	No

RD11 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	80	61	No
2:30:00 PM	79	61	No
2:45:00 PM	81	61	No
3:00:00 PM	81	61	No
3:15:00 PM	81	61	No
3:30:00 PM	80	61	No
3:45:00 PM	81	61	No
4:00:00 PM	81	61	No
4:15:00 PM	81	61	No
4:30:00 PM	81	61	No
4:45:00 PM	82	61	No
5:00:00 PM	80	61	No
5:15:00 PM	87	61	No
5:30:00 PM	85	61	No
5:45:00 PM	84	61	No
6:00:00 PM	87	61	No
6:15:00 PM	80	61	No
6:30:00 PM	91	61	No
6:45:00 PM	89	61	No
7:00:00 PM	84	61	No
7:15:00 PM	81	61	No
7:30:00 PM	81	61	No
7:45:00 PM	80	61	No
8:00:00 PM	83	61	No
8:15:00 PM	80	61	No
8:30:00 PM	80	61	No
8:45:00 PM	80	61	No
9:00:00 PM	81	61	No
9:15:00 PM	80	61	No
9:30:00 PM	79	61	No
9:45:00 PM	79	61	No
10:00:00 PM	78	61	No
10:15:00 PM	78	61	No
10:30:00 PM	81	61	No
10:45:00 PM	78	61	No
11:00:00 PM	78	61	No
11:15:00 PM	79	61	No
11:30:00 PM	77	61	No
11:45:00 PM	78	61	No

RD11 Elevated Receivers			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	75	64	No
12:15:00 AM	76	64	No
12:30:00 AM	73	64	No
12:45:00 AM	72	64	No
1:00:00 AM	74	64	No
1:15:00 AM	72	64	No
1:30:00 AM	71	64	No
1:45:00 AM	75	64	No
2:00:00 AM	71	64	No
2:15:00 AM	71	64	No
2:30:00 AM	72	64	No
2:45:00 AM	70	64	No
3:00:00 AM	70	64	No
3:15:00 AM	69	64	No
3:30:00 AM	67	64	No
3:45:00 AM	73	64	No
4:00:00 AM	68	64	No
4:15:00 AM	70	64	No
4:30:00 AM	72	64	No
4:45:00 AM	73	64	No
5:00:00 AM	73	64	No
5:15:00 AM	75	64	No
5:30:00 AM	75	64	No
5:45:00 AM	76	64	No
6:00:00 AM	77	64	No
6:15:00 AM	77	64	No
6:30:00 AM	78	64	No
6:45:00 AM	79	64	No
7:00:00 AM	80	64	No
7:15:00 AM	80	64	No
7:30:00 AM	80	64	No
7:45:00 AM	80	64	No
8:00:00 AM	80	64	No
8:15:00 AM	80	64	No
8:30:00 AM	79	64	No
8:45:00 AM	79	64	No
9:00:00 AM	79	64	No
9:15:00 AM	89	64	No
9:30:00 AM	79	64	No
9:45:00 AM	79	64	No
10:00:00 AM	79	64	No
10:15:00 AM	79	64	No
10:30:00 AM	78	64	No
10:45:00 AM	78	64	No
11:00:00 AM	79	64	No
11:15:00 AM	78	64	No
11:30:00 AM	78	64	No
11:45:00 AM	79	64	No
12:00:00 PM	77	64	No
12:15:00 PM	79	64	No
12:30:00 PM	79	64	No
12:45:00 PM	79	64	No
1:00:00 PM	78	64	No
1:15:00 PM	79	64	No
1:30:00 PM	84	64	No
1:45:00 PM	85	64	No
2:00:00 PM	79	64	No

RD11 Elevated Receivers			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	78	64	No
2:30:00 PM	77	64	No
2:45:00 PM	79	64	No
3:00:00 PM	79	64	No
3:15:00 PM	79	64	No
3:30:00 PM	78	64	No
3:45:00 PM	79	64	No
4:00:00 PM	79	64	No
4:15:00 PM	79	64	No
4:30:00 PM	79	64	No
4:45:00 PM	80	64	No
5:00:00 PM	78	64	No
5:15:00 PM	85	64	No
5:30:00 PM	83	64	No
5:45:00 PM	82	64	No
6:00:00 PM	85	64	No
6:15:00 PM	78	64	No
6:30:00 PM	89	64	No
6:45:00 PM	87	64	No
7:00:00 PM	82	64	No
7:15:00 PM	79	64	No
7:30:00 PM	79	64	No
7:45:00 PM	78	64	No
8:00:00 PM	81	64	No
8:15:00 PM	78	64	No
8:30:00 PM	78	64	No
8:45:00 PM	78	64	No
9:00:00 PM	79	64	No
9:15:00 PM	78	64	No
9:30:00 PM	77	64	No
9:45:00 PM	77	64	No
10:00:00 PM	76	64	No
10:15:00 PM	76	64	No
10:30:00 PM	79	64	No
10:45:00 PM	76	64	No
11:00:00 PM	76	64	No
11:15:00 PM	77	64	No
11:30:00 PM	75	64	No
11:45:00 PM	76	64	No

RD11 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	77	61	No
12:15:00 AM	76	61	No
12:30:00 AM	78	61	No
12:45:00 AM	76	61	No
1:00:00 AM	75	61	No
1:15:00 AM	75	61	No
1:30:00 AM	76	61	No
1:45:00 AM	74	61	No
2:00:00 AM	75	61	No
2:15:00 AM	78	61	No
2:30:00 AM	75	61	No
2:45:00 AM	75	61	No
3:00:00 AM	78	61	No
3:15:00 AM	75	61	No
3:30:00 AM	77	61	No
3:45:00 AM	72	61	No
4:00:00 AM	76	61	No
4:15:00 AM	72	61	No
4:30:00 AM	74	61	No
4:45:00 AM	76	61	No
5:00:00 AM	71	61	No
5:15:00 AM	70	61	No
5:30:00 AM	73	61	No
5:45:00 AM	71	61	No
6:00:00 AM	73	61	No
6:15:00 AM	74	61	No
6:30:00 AM	75	61	No
6:45:00 AM	74	61	No
7:00:00 AM	76	61	No
7:15:00 AM	76	61	No
7:30:00 AM	76	61	No
7:45:00 AM	76	61	No
8:00:00 AM	77	61	No
8:15:00 AM	83	61	No
8:30:00 AM	77	61	No
8:45:00 AM	77	61	No
9:00:00 AM	78	61	No
9:15:00 AM	77	61	No
9:30:00 AM	78	61	No
9:45:00 AM	79	61	No
10:00:00 AM	77	61	No
10:15:00 AM	78	61	No
10:30:00 AM	78	61	No
10:45:00 AM	81	61	No
11:00:00 AM	78	61	No
11:15:00 AM	78	61	No
11:30:00 AM	78	61	No
11:45:00 AM	86	61	No
12:00:00 PM	78	61	No
12:15:00 PM	79	61	No
12:30:00 PM	80	61	No
12:45:00 PM	80	61	No
1:00:00 PM	79	61	No
1:15:00 PM	79	61	No
1:30:00 PM	79	61	No
1:45:00 PM	79	61	No
2:00:00 PM	78	61	No

RD11 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	80	61	No
2:30:00 PM	79	61	No
2:45:00 PM	78	61	No
3:00:00 PM	79	61	No
3:15:00 PM	78	61	No
3:30:00 PM	78	61	No
3:45:00 PM	78	61	No
4:00:00 PM	82	61	No
4:15:00 PM	78	61	No
4:30:00 PM	78	61	No
4:45:00 PM	82	61	No
5:00:00 PM	79	61	No
5:15:00 PM	78	61	No
5:30:00 PM	78	61	No
5:45:00 PM	82	61	No
6:00:00 PM	78	61	No
6:15:00 PM	79	61	No
6:30:00 PM	79	61	No
6:45:00 PM	78	61	No
7:00:00 PM	80	61	No
7:15:00 PM	79	61	No
7:30:00 PM	80	61	No
7:45:00 PM	80	61	No
8:00:00 PM	80	61	No
8:15:00 PM	80	61	No
8:30:00 PM	79	61	No
8:45:00 PM	79	61	No
9:00:00 PM	82	61	No
9:15:00 PM	79	61	No
9:30:00 PM	78	61	No
9:45:00 PM	80	61	No
10:00:00 PM	78	61	No
10:15:00 PM	80	61	No
10:30:00 PM	79	61	No
10:45:00 PM	78	61	No
11:00:00 PM	77	61	No
11:15:00 PM	76	61	No
11:30:00 PM	80	61	No
11:45:00 PM	81	61	No

RD11 Weekends Elevated Receivers			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	75	64	No
12:15:00 AM	74	64	No
12:30:00 AM	76	64	No
12:45:00 AM	74	64	No
1:00:00 AM	73	64	No
1:15:00 AM	73	64	No
1:30:00 AM	74	64	No
1:45:00 AM	72	64	No
2:00:00 AM	73	64	No
2:15:00 AM	76	64	No
2:30:00 AM	73	64	No
2:45:00 AM	73	64	No
3:00:00 AM	76	64	No
3:15:00 AM	73	64	No
3:30:00 AM	75	64	No
3:45:00 AM	70	64	No
4:00:00 AM	74	64	No
4:15:00 AM	70	64	No
4:30:00 AM	72	64	No
4:45:00 AM	74	64	No
5:00:00 AM	69	64	No
5:15:00 AM	68	64	No
5:30:00 AM	71	64	No
5:45:00 AM	69	64	No
6:00:00 AM	71	64	No
6:15:00 AM	72	64	No
6:30:00 AM	73	64	No
6:45:00 AM	72	64	No
7:00:00 AM	74	64	No
7:15:00 AM	74	64	No
7:30:00 AM	74	64	No
7:45:00 AM	74	64	No
8:00:00 AM	75	64	No
8:15:00 AM	81	64	No
8:30:00 AM	75	64	No
8:45:00 AM	75	64	No
9:00:00 AM	76	64	No
9:15:00 AM	75	64	No
9:30:00 AM	76	64	No
9:45:00 AM	77	64	No
10:00:00 AM	75	64	No
10:15:00 AM	76	64	No
10:30:00 AM	76	64	No
10:45:00 AM	79	64	No
11:00:00 AM	76	64	No
11:15:00 AM	76	64	No
11:30:00 AM	76	64	No
11:45:00 AM	84	64	No
12:00:00 PM	76	64	No
12:15:00 PM	77	64	No
12:30:00 PM	78	64	No
12:45:00 PM	78	64	No
1:00:00 PM	77	64	No
1:15:00 PM	77	64	No
1:30:00 PM	77	64	No
1:45:00 PM	77	64	No
2:00:00 PM	76	64	No

RD11 Weekends Elevated Receivers			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	77	64	No
2:30:00 PM	77	64	No
2:45:00 PM	76	64	No
3:00:00 PM	77	64	No
3:15:00 PM	76	64	No
3:30:00 PM	76	64	No
3:45:00 PM	76	64	No
4:00:00 PM	80	64	No
4:15:00 PM	76	64	No
4:30:00 PM	76	64	No
4:45:00 PM	80	64	No
5:00:00 PM	77	64	No
5:15:00 PM	76	64	No
5:30:00 PM	76	64	No
5:45:00 PM	80	64	No
6:00:00 PM	76	64	No
6:15:00 PM	77	64	No
6:30:00 PM	77	64	No
6:45:00 PM	75	64	No
7:00:00 PM	78	64	No
7:15:00 PM	77	64	No
7:30:00 PM	78	64	No
7:45:00 PM	78	64	No
8:00:00 PM	78	64	No
8:15:00 PM	78	64	No
8:30:00 PM	77	64	No
8:45:00 PM	77	64	No
9:00:00 PM	80	64	No
9:15:00 PM	77	64	No
9:30:00 PM	76	64	No
9:45:00 PM	78	64	No
10:00:00 PM	76	64	No
10:15:00 PM	78	64	No
10:30:00 PM	77	64	No
10:45:00 PM	76	64	No
11:00:00 PM	75	64	No
11:15:00 PM	74	64	No
11:30:00 PM	78	64	No
11:45:00 PM	79	64	No

RD12 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	70	47	No
12:15:00 AM	68	47	No
12:30:00 AM	68	47	No
12:45:00 AM	69	47	No
1:00:00 AM	72	47	No
1:15:00 AM	64	47	No
1:30:00 AM	69	47	No
1:45:00 AM	67	47	No
2:00:00 AM	64	47	No
2:15:00 AM	65	47	No
2:30:00 AM	73	47	No
2:45:00 AM	70	47	No
3:00:00 AM	77	47	No
3:15:00 AM	70	47	No
3:30:00 AM	63	47	No
3:45:00 AM	67	47	No
4:00:00 AM	64	47	No
4:15:00 AM	62	47	No
4:30:00 AM	65	47	No
4:45:00 AM	72	47	No
5:00:00 AM	67	47	No
5:15:00 AM	66	47	No
5:30:00 AM	71	47	No
5:45:00 AM	72	47	No
6:00:00 AM	70	47	No
6:15:00 AM	74	47	No
6:30:00 AM	73	47	No
6:45:00 AM	72	47	No
7:00:00 AM	73	47	No
7:15:00 AM	74	47	No
7:30:00 AM	73	47	No
7:45:00 AM	74	47	No
8:00:00 AM	75	47	No
8:15:00 AM	75	47	No
8:30:00 AM	76	47	No
8:45:00 AM	75	47	No
9:00:00 AM	76	47	No
9:15:00 AM	76	47	No
9:30:00 AM	75	47	No
9:45:00 AM	77	47	No
10:00:00 AM	77	47	No
10:15:00 AM	76	47	No
10:30:00 AM	76	47	No
10:45:00 AM	75	47	No
11:00:00 AM	76	47	No
11:15:00 AM	74	47	No
11:30:00 AM	75	47	No
11:45:00 AM	76	47	No
12:00:00 PM	76	47	No
12:15:00 PM	82	47	No
12:30:00 PM	75	47	No
12:45:00 PM	76	47	No
1:00:00 PM	75	47	No
1:15:00 PM	76	47	No
1:30:00 PM	75	47	No
1:45:00 PM	75	47	No
2:00:00 PM	75	47	No

RD12 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	75	47	No
2:30:00 PM	75	47	No
2:45:00 PM	74	47	No
3:00:00 PM	75	47	No
3:15:00 PM	75	47	No
3:30:00 PM	74	47	No
3:45:00 PM	75	47	No
4:00:00 PM	76	47	No
4:15:00 PM	74	47	No
4:30:00 PM	75	47	No
4:45:00 PM	79	47	No
5:00:00 PM	76	47	No
5:15:00 PM	74	47	No
5:30:00 PM	76	47	No
5:45:00 PM	75	47	No
6:00:00 PM	75	47	No
6:15:00 PM	74	47	No
6:30:00 PM	74	47	No
6:45:00 PM	76	47	No
7:00:00 PM	74	47	No
7:15:00 PM	73	47	No
7:30:00 PM	72	47	No
7:45:00 PM	72	47	No
8:00:00 PM	71	47	No
8:15:00 PM	72	47	No
8:30:00 PM	72	47	No
8:45:00 PM	71	47	No
9:00:00 PM	72	47	No
9:15:00 PM	72	47	No
9:30:00 PM	74	47	No
9:45:00 PM	71	47	No
10:00:00 PM	74	47	No
10:15:00 PM	73	47	No
10:30:00 PM	72	47	No
10:45:00 PM	69	47	No
11:00:00 PM	71	47	No
11:15:00 PM	71	47	No
11:30:00 PM	69	47	No
11:45:00 PM	69	47	No

RD12 Elevated Receiver			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	67	49	No
12:15:00 AM	66	49	No
12:30:00 AM	65	49	No
12:45:00 AM	67	49	No
1:00:00 AM	69	49	No
1:15:00 AM	61	49	No
1:30:00 AM	67	49	No
1:45:00 AM	64	49	No
2:00:00 AM	62	49	No
2:15:00 AM	62	49	No
2:30:00 AM	70	49	No
2:45:00 AM	68	49	No
3:00:00 AM	74	49	No
3:15:00 AM	68	49	No
3:30:00 AM	61	49	No
3:45:00 AM	65	49	No
4:00:00 AM	61	49	No
4:15:00 AM	59	49	No
4:30:00 AM	63	49	No
4:45:00 AM	70	49	No
5:00:00 AM	65	49	No
5:15:00 AM	64	49	No
5:30:00 AM	68	49	No
5:45:00 AM	69	49	No
6:00:00 AM	68	49	No
6:15:00 AM	72	49	No
6:30:00 AM	70	49	No
6:45:00 AM	70	49	No
7:00:00 AM	71	49	No
7:15:00 AM	72	49	No
7:30:00 AM	71	49	No
7:45:00 AM	72	49	No
8:00:00 AM	72	49	No
8:15:00 AM	73	49	No
8:30:00 AM	74	49	No
8:45:00 AM	73	49	No
9:00:00 AM	73	49	No
9:15:00 AM	73	49	No
9:30:00 AM	72	49	No
9:45:00 AM	74	49	No
10:00:00 AM	74	49	No
10:15:00 AM	73	49	No
10:30:00 AM	73	49	No
10:45:00 AM	73	49	No
11:00:00 AM	73	49	No
11:15:00 AM	72	49	No
11:30:00 AM	72	49	No
11:45:00 AM	73	49	No
12:00:00 PM	73	49	No
12:15:00 PM	79	49	No
12:30:00 PM	73	49	No
12:45:00 PM	74	49	No
1:00:00 PM	73	49	No
1:15:00 PM	74	49	No
1:30:00 PM	73	49	No
1:45:00 PM	72	49	No
2:00:00 PM	73	49	No

RD12 Elevated Receiver			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	72	49	No
2:30:00 PM	73	49	No
2:45:00 PM	72	49	No
3:00:00 PM	73	49	No
3:15:00 PM	72	49	No
3:30:00 PM	72	49	No
3:45:00 PM	73	49	No
4:00:00 PM	74	49	No
4:15:00 PM	72	49	No
4:30:00 PM	73	49	No
4:45:00 PM	76	49	No
5:00:00 PM	74	49	No
5:15:00 PM	72	49	No
5:30:00 PM	73	49	No
5:45:00 PM	73	49	No
6:00:00 PM	72	49	No
6:15:00 PM	72	49	No
6:30:00 PM	72	49	No
6:45:00 PM	73	49	No
7:00:00 PM	71	49	No
7:15:00 PM	70	49	No
7:30:00 PM	69	49	No
7:45:00 PM	70	49	No
8:00:00 PM	69	49	No
8:15:00 PM	69	49	No
8:30:00 PM	69	49	No
8:45:00 PM	68	49	No
9:00:00 PM	69	49	No
9:15:00 PM	70	49	No
9:30:00 PM	71	49	No
9:45:00 PM	68	49	No
10:00:00 PM	72	49	No
10:15:00 PM	70	49	No
10:30:00 PM	70	49	No
10:45:00 PM	67	49	No
11:00:00 PM	69	49	No
11:15:00 PM	68	49	No
11:30:00 PM	66	49	No
11:45:00 PM	67	49	No

RD13 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	76	58	No
12:15:00 AM	75	58	No
12:30:00 AM	74	58	No
12:45:00 AM	88	58	No
1:00:00 AM	73	58	No
1:15:00 AM	72	58	No
1:30:00 AM	87	58	No
1:45:00 AM	82	58	No
2:00:00 AM	77	58	No
2:15:00 AM	74	58	No
2:30:00 AM	74	58	No
2:45:00 AM	71	58	No
3:00:00 AM	72	58	No
3:15:00 AM	72	58	No
3:30:00 AM	71	58	No
3:45:00 AM	71	58	No
4:00:00 AM	72	58	No
4:15:00 AM	70	58	No
4:30:00 AM	73	58	No
4:45:00 AM	75	58	No
5:00:00 AM	75	58	No
5:15:00 AM	75	58	No
5:30:00 AM	77	58	No
5:45:00 AM	77	58	No
6:00:00 AM	78	58	No
6:15:00 AM	79	58	No
6:30:00 AM	84	58	No
6:45:00 AM	86	58	No
7:00:00 AM	84	58	No
7:15:00 AM	84	58	No
7:30:00 AM	84	58	No
7:45:00 AM	82	58	No
8:00:00 AM	84	58	No
8:15:00 AM	80	58	No
8:30:00 AM	81	58	No
8:45:00 AM	81	58	No
9:00:00 AM	80	58	No
9:15:00 AM	80	58	No
9:30:00 AM	80	58	No
9:45:00 AM	79	58	No
10:00:00 AM	83	58	No
10:15:00 AM	79	58	No
10:30:00 AM	79	58	No
10:45:00 AM	79	58	No
11:00:00 AM	79	58	No
11:15:00 AM	79	58	No
11:30:00 AM	79	58	No
11:45:00 AM	79	58	No
12:00:00 PM	79	58	No
12:15:00 PM	79	58	No
12:30:00 PM	78	58	No
12:45:00 PM	78	58	No
1:00:00 PM	80	58	No
1:15:00 PM	80	58	No
1:30:00 PM	79	58	No
1:45:00 PM	79	58	No
2:00:00 PM	81	58	No

RD13 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	78	58	No
2:30:00 PM	78	58	No
2:45:00 PM	79	58	No
3:00:00 PM	78	58	No
3:15:00 PM	79	58	No
3:30:00 PM	79	58	No
3:45:00 PM	78	58	No
4:00:00 PM	79	58	No
4:15:00 PM	85	58	No
4:30:00 PM	78	58	No
4:45:00 PM	80	58	No
5:00:00 PM	79	58	No
5:15:00 PM	78	58	No
5:30:00 PM	77	58	No
5:45:00 PM	77	58	No
6:00:00 PM	78	58	No
6:15:00 PM	78	58	No
6:30:00 PM	77	58	No
6:45:00 PM	78	58	No
7:00:00 PM	78	58	No
7:15:00 PM	78	58	No
7:30:00 PM	78	58	No
7:45:00 PM	80	58	No
8:00:00 PM	78	58	No
8:15:00 PM	78	58	No
8:30:00 PM	78	58	No
8:45:00 PM	78	58	No
9:00:00 PM	78	58	No
9:15:00 PM	78	58	No
9:30:00 PM	78	58	No
9:45:00 PM	77	58	No
10:00:00 PM	85	58	No
10:15:00 PM	79	58	No
10:30:00 PM	78	58	No
10:45:00 PM	76	58	No
11:00:00 PM	77	58	No
11:15:00 PM	77	58	No
11:30:00 PM	75	58	No
11:45:00 PM	76	58	No

RD13 Elevated Receiver			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	75	59	No
12:15:00 AM	74	59	No
12:30:00 AM	73	59	No
12:45:00 AM	87	59	No
1:00:00 AM	72	59	No
1:15:00 AM	71	59	No
1:30:00 AM	86	59	No
1:45:00 AM	81	59	No
2:00:00 AM	76	59	No
2:15:00 AM	73	59	No
2:30:00 AM	73	59	No
2:45:00 AM	70	59	No
3:00:00 AM	71	59	No
3:15:00 AM	71	59	No
3:30:00 AM	70	59	No
3:45:00 AM	70	59	No
4:00:00 AM	71	59	No
4:15:00 AM	70	59	No
4:30:00 AM	72	59	No
4:45:00 AM	74	59	No
5:00:00 AM	74	59	No
5:15:00 AM	74	59	No
5:30:00 AM	76	59	No
5:45:00 AM	76	59	No
6:00:00 AM	77	59	No
6:15:00 AM	78	59	No
6:30:00 AM	83	59	No
6:45:00 AM	85	59	No
7:00:00 AM	83	59	No
7:15:00 AM	83	59	No
7:30:00 AM	83	59	No
7:45:00 AM	81	59	No
8:00:00 AM	84	59	No
8:15:00 AM	80	59	No
8:30:00 AM	80	59	No
8:45:00 AM	80	59	No
9:00:00 AM	79	59	No
9:15:00 AM	79	59	No
9:30:00 AM	79	59	No
9:45:00 AM	78	59	No
10:00:00 AM	82	59	No
10:15:00 AM	78	59	No
10:30:00 AM	78	59	No
10:45:00 AM	78	59	No
11:00:00 AM	78	59	No
11:15:00 AM	78	59	No
11:30:00 AM	78	59	No
11:45:00 AM	78	59	No
12:00:00 PM	78	59	No
12:15:00 PM	78	59	No
12:30:00 PM	77	59	No
12:45:00 PM	78	59	No
1:00:00 PM	79	59	No
1:15:00 PM	79	59	No
1:30:00 PM	78	59	No
1:45:00 PM	78	59	No
2:00:00 PM	80	59	No

RD13 Elevated Receiver			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	77	59	No
2:30:00 PM	77	59	No
2:45:00 PM	78	59	No
3:00:00 PM	77	59	No
3:15:00 PM	78	59	No
3:30:00 PM	78	59	No
3:45:00 PM	77	59	No
4:00:00 PM	78	59	No
4:15:00 PM	84	59	No
4:30:00 PM	77	59	No
4:45:00 PM	79	59	No
5:00:00 PM	78	59	No
5:15:00 PM	77	59	No
5:30:00 PM	77	59	No
5:45:00 PM	76	59	No
6:00:00 PM	77	59	No
6:15:00 PM	77	59	No
6:30:00 PM	76	59	No
6:45:00 PM	77	59	No
7:00:00 PM	77	59	No
7:15:00 PM	77	59	No
7:30:00 PM	77	59	No
7:45:00 PM	79	59	No
8:00:00 PM	77	59	No
8:15:00 PM	77	59	No
8:30:00 PM	77	59	No
8:45:00 PM	77	59	No
9:00:00 PM	77	59	No
9:15:00 PM	78	59	No
9:30:00 PM	77	59	No
9:45:00 PM	76	59	No
10:00:00 PM	85	59	No
10:15:00 PM	78	59	No
10:30:00 PM	77	59	No
10:45:00 PM	75	59	No
11:00:00 PM	76	59	No
11:15:00 PM	76	59	No
11:30:00 PM	75	59	No
11:45:00 PM	75	59	No

RD13 Elevated Receiver -Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	76	59	No
12:15:00 AM	75	59	No
12:30:00 AM	77	59	No
12:45:00 AM	75	59	No
1:00:00 AM	75	59	No
1:15:00 AM	75	59	No
1:30:00 AM	76	59	No
1:45:00 AM	75	59	No
2:00:00 AM	72	59	No
2:15:00 AM	81	59	No
2:30:00 AM	71	59	No
2:45:00 AM	70	59	No
3:00:00 AM	73	59	No
3:15:00 AM	73	59	No
3:30:00 AM	74	59	No
3:45:00 AM	72	59	No
4:00:00 AM	73	59	No
4:15:00 AM	73	59	No
4:30:00 AM	73	59	No
4:45:00 AM	75	59	No
5:00:00 AM	74	59	No
5:15:00 AM	75	59	No
5:30:00 AM	74	59	No
5:45:00 AM	75	59	No
6:00:00 AM	75	59	No
6:15:00 AM	75	59	No
6:30:00 AM	76	59	No
6:45:00 AM	77	59	No
7:00:00 AM	76	59	No
7:15:00 AM	77	59	No
7:30:00 AM	74	59	No
7:45:00 AM	75	59	No
8:00:00 AM	75	59	No
8:15:00 AM	75	59	No
8:30:00 AM	76	59	No
8:45:00 AM	76	59	No
9:00:00 AM	76	59	No
9:15:00 AM	75	59	No
9:30:00 AM	77	59	No
9:45:00 AM	76	59	No
10:00:00 AM	77	59	No
10:15:00 AM	76	59	No
10:30:00 AM	76	59	No
10:45:00 AM	76	59	No
11:00:00 AM	76	59	No
11:15:00 AM	79	59	No
11:30:00 AM	78	59	No
11:45:00 AM	78	59	No
12:00:00 PM	78	59	No
12:15:00 PM	75	59	No
12:30:00 PM	77	59	No
12:45:00 PM	76	59	No
1:00:00 PM	77	59	No
1:15:00 PM	85	59	No
1:30:00 PM	87	59	No
1:45:00 PM	81	59	No
2:00:00 PM	78	59	No

RD13 Elevated Receiver - Weekends			
Time	Lcq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	77	59	No
2:30:00 PM	78	59	No
2:45:00 PM	77	59	No
3:00:00 PM	76	59	No
3:15:00 PM	76	59	No
3:30:00 PM	78	59	No
3:45:00 PM	77	59	No
4:00:00 PM	76	59	No
4:15:00 PM	76	59	No
4:30:00 PM	76	59	No
4:45:00 PM	76	59	No
5:00:00 PM	81	59	No
5:15:00 PM	78	59	No
5:30:00 PM	76	59	No
5:45:00 PM	75	59	No
6:00:00 PM	76	59	No
6:15:00 PM	76	59	No
6:30:00 PM	76	59	No
6:45:00 PM	76	59	No
7:00:00 PM	77	59	No
7:15:00 PM	78	59	No
7:30:00 PM	77	59	No
7:45:00 PM	83	59	No
8:00:00 PM	80	59	No
8:15:00 PM	78	59	No
8:30:00 PM	78	59	No
8:45:00 PM	79	59	No
9:00:00 PM	78	59	No
9:15:00 PM	79	59	No
9:30:00 PM	77	59	No
9:45:00 PM	77	59	No
10:00:00 PM	77	59	No
10:15:00 PM	81	59	No
10:30:00 PM	76	59	No
10:45:00 PM	77	59	No
11:00:00 PM	77	59	No
11:15:00 PM	78	59	No
11:30:00 PM	82	59	No
11:45:00 PM	76	59	No

RD14 Elevated Receiver			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	70	49	No
12:15:00 AM	70	49	No
12:30:00 AM	67	49	No
12:45:00 AM	79	49	No
1:00:00 AM	67	49	No
1:15:00 AM	65	49	No
1:30:00 AM	77	49	No
1:45:00 AM	74	49	No
2:00:00 AM	64	49	No
2:15:00 AM	65	49	No
2:30:00 AM	66	49	No
2:45:00 AM	66	49	No
3:00:00 AM	70	49	No
3:15:00 AM	67	49	No
3:30:00 AM	64	49	No
3:45:00 AM	64	49	No
4:00:00 AM	65	49	No
4:15:00 AM	65	49	No
4:30:00 AM	68	49	No
4:45:00 AM	69	49	No
5:00:00 AM	69	49	No
5:15:00 AM	72	49	No
5:30:00 AM	71	49	No
5:45:00 AM	72	49	No
6:00:00 AM	72	49	No
6:15:00 AM	72	49	No
6:30:00 AM	74	49	No
6:45:00 AM	75	49	No
7:00:00 AM	73	49	No
7:15:00 AM	74	49	No
7:30:00 AM	76	49	No
7:45:00 AM	75	49	No
8:00:00 AM	75	49	No
8:15:00 AM	74	49	No
8:30:00 AM	75	49	No
8:45:00 AM	76	49	No
9:00:00 AM	75	49	No
9:15:00 AM	76	49	No
9:30:00 AM	75	49	No
9:45:00 AM	74	49	No
10:00:00 AM	78	49	No
10:15:00 AM	74	49	No
10:30:00 AM	73	49	No
10:45:00 AM	75	49	No
11:00:00 AM	73	49	No
11:15:00 AM	73	49	No
11:30:00 AM	73	49	No
11:45:00 AM	74	49	No
12:00:00 PM	76	49	No
12:15:00 PM	74	49	No
12:30:00 PM	73	49	No
12:45:00 PM	72	49	No
1:00:00 PM	74	49	No
1:15:00 PM	74	49	No
1:30:00 PM	73	49	No
1:45:00 PM	73	49	No
2:00:00 PM	74	49	No
2:15:00 PM	73	49	No
2:30:00 PM	74	49	No

RD14 Elevated Receiver			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:45:00 PM	76	49	No
3:00:00 PM	74	49	No
3:15:00 PM	73	49	No
3:30:00 PM	74	49	No
3:45:00 PM	74	49	No
4:00:00 PM	74	49	No
4:15:00 PM	73	49	No
4:30:00 PM	73	49	No
4:45:00 PM	73	49	No
5:00:00 PM	73	49	No
5:15:00 PM	74	49	No
5:30:00 PM	73	49	No
5:45:00 PM	73	49	No
6:00:00 PM	74	49	No
6:15:00 PM	71	49	No
6:30:00 PM	71	49	No
6:45:00 PM	71	49	No
7:00:00 PM	73	49	No
7:15:00 PM	73	49	No
7:30:00 PM	72	49	No
7:45:00 PM	72	49	No
8:00:00 PM	72	49	No
8:15:00 PM	72	49	No
8:30:00 PM	72	49	No
8:45:00 PM	71	49	No
9:00:00 PM	71	49	No
9:15:00 PM	72	49	No
9:30:00 PM	73	49	No
9:45:00 PM	70	49	No
10:00:00 PM	79	49	No
10:15:00 PM	71	49	No
10:30:00 PM	76	49	No
10:45:00 PM	70	49	No
11:00:00 PM	70	49	No
11:15:00 PM	70	49	No
11:30:00 PM	69	49	No
11:45:00 PM	69	49	No

RD14 Elevated Receiver - Weekend			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	68	49	No
12:15:00 AM	69	49	No
12:30:00 AM	68	49	No
12:45:00 AM	66	49	No
1:00:00 AM	66	49	No
1:15:00 AM	66	49	No
1:30:00 AM	66	49	No
1:45:00 AM	65	49	No
2:00:00 AM	64	49	No
2:15:00 AM	68	49	No
2:30:00 AM	64	49	No
2:45:00 AM	66	49	No
3:00:00 AM	67	49	No
3:15:00 AM	66	49	No
3:30:00 AM	66	49	No
3:45:00 AM	63	49	No
4:00:00 AM	62	49	No
4:15:00 AM	62	49	No
4:30:00 AM	63	49	No
4:45:00 AM	65	49	No
5:00:00 AM	61	49	No
5:15:00 AM	60	49	No
5:30:00 AM	64	49	No
5:45:00 AM	64	49	No
6:00:00 AM	62	49	No
6:15:00 AM	65	49	No
6:30:00 AM	66	49	No
6:45:00 AM	66	49	No
7:00:00 AM	68	49	No
7:15:00 AM	67	49	No
7:30:00 AM	68	49	No
7:45:00 AM	68	49	No
8:00:00 AM	68	49	No
8:15:00 AM	69	49	No
8:30:00 AM	68	49	No
8:45:00 AM	69	49	No
9:00:00 AM	70	49	No
9:15:00 AM	69	49	No
9:30:00 AM	69	49	No
9:45:00 AM	71	49	No
10:00:00 AM	69	49	No
10:15:00 AM	70	49	No
10:30:00 AM	69	49	No
10:45:00 AM	70	49	No
11:00:00 AM	69	49	No
11:15:00 AM	69	49	No
11:30:00 AM	70	49	No
11:45:00 AM	74	49	No
12:00:00 PM	70	49	No
12:15:00 PM	70	49	No
12:30:00 PM	71	49	No
12:45:00 PM	71	49	No
1:00:00 PM	71	49	No
1:15:00 PM	70	49	No
1:30:00 PM	69	49	No
1:45:00 PM	70	49	No
2:00:00 PM	70	49	No
2:15:00 PM	71	49	No
2:30:00 PM	70	49	No

RD14 Elevated Receiver - Weekend			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:45:00 PM	71	49	No
3:00:00 PM	72	49	No
3:15:00 PM	69	49	No
3:30:00 PM	69	49	No
3:45:00 PM	69	49	No
4:00:00 PM	74	49	No
4:15:00 PM	69	49	No
4:30:00 PM	70	49	No
4:45:00 PM	73	49	No
5:00:00 PM	70	49	No
5:15:00 PM	69	49	No
5:30:00 PM	70	49	No
5:45:00 PM	71	49	No
6:00:00 PM	69	49	No
6:15:00 PM	70	49	No
6:30:00 PM	69	49	No
6:45:00 PM	70	49	No
7:00:00 PM	71	49	No
7:15:00 PM	72	49	No
7:30:00 PM	71	49	No
7:45:00 PM	71	49	No
8:00:00 PM	71	49	No
8:15:00 PM	71	49	No
8:30:00 PM	71	49	No
8:45:00 PM	71	49	No
9:00:00 PM	71	49	No
9:15:00 PM	70	49	No
9:30:00 PM	70	49	No
9:45:00 PM	71	49	No
10:00:00 PM	69	49	No
10:15:00 PM	70	49	No
10:30:00 PM	70	49	No
10:45:00 PM	69	49	No
11:00:00 PM	69	49	No
11:15:00 PM	70	49	No
11:30:00 PM	69	49	No
11:45:00 PM	72	49	No

RD15 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	63	60	No
12:15:00 AM	63	60	No
12:30:00 AM	63	60	No
12:45:00 AM	76	60	No
1:00:00 AM	75	60	No
1:15:00 AM	61	60	No
1:30:00 AM	74	60	No
1:45:00 AM	69	60	No
2:00:00 AM	61	60	No
2:15:00 AM	61	60	No
2:30:00 AM	64	60	No
2:45:00 AM	64	60	No
3:00:00 AM	64	60	No
3:15:00 AM	62	60	No
3:30:00 AM	64	60	No
3:45:00 AM	61	60	No
4:00:00 AM	61	60	No
4:15:00 AM	62	60	No
4:30:00 AM	63	60	No
4:45:00 AM	64	60	No
5:00:00 AM	69	60	No
5:15:00 AM	63	60	No
5:30:00 AM	65	60	No
5:45:00 AM	64	60	No
6:00:00 AM	68	60	No
6:15:00 AM	71	60	No
6:30:00 AM	78	60	No
6:45:00 AM	75	60	No
7:00:00 AM	71	60	No
7:15:00 AM	76	60	No
7:30:00 AM	71	60	No
7:45:00 AM	72	60	No
8:00:00 AM	72	60	No
8:15:00 AM	74	60	No
8:30:00 AM	75	60	No
8:45:00 AM	74	60	No
9:00:00 AM	74	60	No
9:15:00 AM	76	60	No
9:30:00 AM	76	60	No
9:45:00 AM	76	60	No
10:00:00 AM	75	60	No
10:15:00 AM	72	60	No
10:30:00 AM	70	60	No
10:45:00 AM	73	60	No
11:00:00 AM	72	60	No
11:15:00 AM	76	60	No
11:30:00 AM	71	60	No
11:45:00 AM	74	60	No
12:00:00 PM	73	60	No
12:15:00 PM	68	60	No
12:30:00 PM	71	60	No
12:45:00 PM	75	60	No
1:00:00 PM	78	60	No
1:15:00 PM	78	60	No
1:30:00 PM	75	60	No
1:45:00 PM	73	60	No

RD15 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:00:00 PM	76	60	No
2:15:00 PM	74	60	No
2:30:00 PM	76	60	No
2:45:00 PM	75	60	No
3:00:00 PM	75	60	No
3:15:00 PM	75	60	No
3:30:00 PM	74	60	No
3:45:00 PM	74	60	No
4:00:00 PM	73	60	No
4:15:00 PM	82	60	No
4:30:00 PM	74	60	No
4:45:00 PM	77	60	No
5:00:00 PM	69	60	No
5:15:00 PM	68	60	No
5:30:00 PM	67	60	No
5:45:00 PM	68	60	No
6:00:00 PM	70	60	No
6:15:00 PM	66	60	No
6:30:00 PM	66	60	No
6:45:00 PM	72	60	No
7:00:00 PM	68	60	No
7:15:00 PM	67	60	No
7:30:00 PM	66	60	No
7:45:00 PM	67	60	No
8:00:00 PM	66	60	No
8:15:00 PM	65	60	No
8:30:00 PM	66	60	No
8:45:00 PM	68	60	No
9:00:00 PM	68	60	No
9:15:00 PM	71	60	No
9:30:00 PM	67	60	No
9:45:00 PM	74	60	No
10:00:00 PM	82	60	No
10:15:00 PM	78	60	No
10:30:00 PM	72	60	No
10:45:00 PM	67	60	No
11:00:00 PM	65	60	No
11:15:00 PM	65	60	No
11:30:00 PM	68	60	No
11:45:00 PM	66	60	No

RD15 Elevated Receivers			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	65	62	No
12:15:00 AM	65	62	No
12:30:00 AM	64	62	No
12:45:00 AM	78	62	No
1:00:00 AM	77	62	No
1:15:00 AM	63	62	No
1:30:00 AM	75	62	No
1:45:00 AM	71	62	No
2:00:00 AM	63	62	No
2:15:00 AM	63	62	No
2:30:00 AM	66	62	No
2:45:00 AM	65	62	No
3:00:00 AM	65	62	No
3:15:00 AM	63	62	No
3:30:00 AM	66	62	No
3:45:00 AM	63	62	No
4:00:00 AM	63	62	No
4:15:00 AM	63	62	No
4:30:00 AM	64	62	No
4:45:00 AM	66	62	No
5:00:00 AM	71	62	No
5:15:00 AM	65	62	No
5:30:00 AM	67	62	No
5:45:00 AM	66	62	No
6:00:00 AM	70	62	No
6:15:00 AM	72	62	No
6:30:00 AM	80	62	No
6:45:00 AM	76	62	No
7:00:00 AM	72	62	No
7:15:00 AM	77	62	No
7:30:00 AM	72	62	No
7:45:00 AM	74	62	No
8:00:00 AM	74	62	No
8:15:00 AM	75	62	No
8:30:00 AM	77	62	No
8:45:00 AM	76	62	No
9:00:00 AM	75	62	No
9:15:00 AM	77	62	No
9:30:00 AM	77	62	No
9:45:00 AM	78	62	No
10:00:00 AM	76	62	No
10:15:00 AM	74	62	No
10:30:00 AM	71	62	No
10:45:00 AM	74	62	No
11:00:00 AM	74	62	No
11:15:00 AM	78	62	No
11:30:00 AM	73	62	No
11:45:00 AM	76	62	No
12:00:00 PM	74	62	No
12:15:00 PM	70	62	No
12:30:00 PM	72	62	No
12:45:00 PM	77	62	No
1:00:00 PM	80	62	No
1:15:00 PM	80	62	No
1:30:00 PM	77	62	No
1:45:00 PM	75	62	No
2:00:00 PM	77	62	No

RD15 Elevated Receivers			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	75	62	No
2:30:00 PM	77	62	No
2:45:00 PM	77	62	No
3:00:00 PM	76	62	No
3:15:00 PM	76	62	No
3:30:00 PM	76	62	No
3:45:00 PM	76	62	No
4:00:00 PM	75	62	No
4:15:00 PM	84	62	No
4:30:00 PM	75	62	No
4:45:00 PM	78	62	No
5:00:00 PM	70	62	No
5:15:00 PM	70	62	No
5:30:00 PM	69	62	No
5:45:00 PM	70	62	No
6:00:00 PM	71	62	No
6:15:00 PM	68	62	No
6:30:00 PM	67	62	No
6:45:00 PM	74	62	No
7:00:00 PM	69	62	No
7:15:00 PM	68	62	No
7:30:00 PM	67	62	No
7:45:00 PM	68	62	No
8:00:00 PM	68	62	No
8:15:00 PM	67	62	No
8:30:00 PM	68	62	No
8:45:00 PM	69	62	No
9:00:00 PM	70	62	No
9:15:00 PM	72	62	No
9:30:00 PM	69	62	No
9:45:00 PM	76	62	No
10:00:00 PM	83	62	No
10:15:00 PM	79	62	No
10:30:00 PM	74	62	No
10:45:00 PM	68	62	No
11:00:00 PM	67	62	No
11:15:00 PM	67	62	No
11:30:00 PM	69	62	No
11:45:00 PM	67	62	No

RD15 Elevated Receivers -Weekend			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	71	62	No
12:15:00 AM	70	62	No
12:30:00 AM	70	62	No
12:45:00 AM	71	62	No
1:00:00 AM	70	62	No
1:15:00 AM	71	62	No
1:30:00 AM	70	62	No
1:45:00 AM	70	62	No
2:00:00 AM	68	62	No
2:15:00 AM	70	62	No
2:30:00 AM	68	62	No
2:45:00 AM	68	62	No
3:00:00 AM	69	62	No
3:15:00 AM	70	62	No
3:30:00 AM	70	62	No
3:45:00 AM	70	62	No
4:00:00 AM	70	62	No
4:15:00 AM	70	62	No
4:30:00 AM	79	62	No
4:45:00 AM	89	62	No
5:00:00 AM	77	62	No
5:15:00 AM	71	62	No
5:30:00 AM	69	62	No
5:45:00 AM	69	62	No
6:00:00 AM	70	62	No
6:15:00 AM	70	62	No
6:30:00 AM	70	62	No
6:45:00 AM	74	62	No
7:00:00 AM	75	62	No
7:15:00 AM	74	62	No
7:30:00 AM	72	62	No
7:45:00 AM	69	62	No
8:00:00 AM	70	62	No
8:15:00 AM	69	62	No
8:30:00 AM	70	62	No
8:45:00 AM	69	62	No
9:00:00 AM	69	62	No
9:15:00 AM	69	62	No
9:30:00 AM	70	62	No
9:45:00 AM	70	62	No
10:00:00 AM	69	62	No
10:15:00 AM	69	62	No
10:30:00 AM	70	62	No
10:45:00 AM	70	62	No
11:00:00 AM	70	62	No
11:15:00 AM	71	62	No
11:30:00 AM	72	62	No
11:45:00 AM	66	62	No
12:00:00 PM	68	62	No
12:15:00 PM	65	62	No
12:30:00 PM	64	62	No
12:45:00 PM	64	62	No
1:00:00 PM	68	62	No
1:15:00 PM	69	62	No
1:30:00 PM	76	62	No
1:45:00 PM	67	62	No
2:00:00 PM	65	62	No
2:15:00 PM	65	62	No

RD15 Elevated Receivers -Weekend			62	
Time	Leq15 Threshold		62	Exceedance (Yes/No)
2:30:00 PM	65		62	No
2:45:00 PM	74		62	No
3:00:00 PM	65		62	No
3:15:00 PM	66		62	No
3:30:00 PM	69		62	No
3:45:00 PM	68		62	No
4:00:00 PM	69		62	No
4:15:00 PM	70		62	No
4:30:00 PM	70		62	No
4:45:00 PM	70		62	No
5:00:00 PM	74		62	No
5:15:00 PM	69		62	No
5:30:00 PM	70		62	No
5:45:00 PM	70		62	No
6:00:00 PM	69		62	No
6:15:00 PM	69		62	No
6:30:00 PM	69		62	No
6:45:00 PM	70		62	No
7:00:00 PM	71		62	No
7:15:00 PM	71		62	No
7:30:00 PM	73		62	No
7:45:00 PM	76		62	No
8:00:00 PM	72		62	No
8:15:00 PM	78		62	No
8:30:00 PM	71		62	No
8:45:00 PM	71		62	No
9:00:00 PM	71		62	No
9:15:00 PM	72		62	No
9:30:00 PM	71		62	No
9:45:00 PM	71		62	No
10:00:00 PM	71		62	No
10:15:00 PM	71		62	No
10:30:00 PM	71		62	No
10:45:00 PM	72		62	No
11:00:00 PM	71		62	No
11:15:00 PM	72		62	No
11:30:00 PM	74		62	No
11:45:00 PM	71		62	No

RD16 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	71	55	No
12:15:00 AM	72	55	No
12:30:00 AM	68	55	No
12:45:00 AM	70	55	No
1:00:00 AM	69	55	No
1:15:00 AM	65	55	No
1:30:00 AM	66	55	No
1:45:00 AM	66	55	No
2:00:00 AM	72	55	No
2:15:00 AM	69	55	No
2:30:00 AM	71	55	No
2:45:00 AM	62	55	No
3:00:00 AM	70	55	No
3:15:00 AM	63	55	No
3:30:00 AM	62	55	No
3:45:00 AM	70	55	No
4:00:00 AM	64	55	No
4:15:00 AM	67	55	No
4:30:00 AM	67	55	No
4:45:00 AM	68	55	No
5:00:00 AM	71	55	No
5:15:00 AM	72	55	No
5:30:00 AM	73	55	No
5:45:00 AM	71	55	No
6:00:00 AM	74	55	No
6:15:00 AM	76	55	No
6:30:00 AM	78	55	No
6:45:00 AM	75	55	No
7:00:00 AM	76	55	No
7:15:00 AM	81	55	No
7:30:00 AM	76	55	No
7:45:00 AM	76	55	No
8:00:00 AM	77	55	No
8:15:00 AM	75	55	No
8:30:00 AM	74	55	No
8:45:00 AM	80	55	No
9:00:00 AM	76	55	No
9:15:00 AM	79	55	No
9:30:00 AM	76	55	No
9:45:00 AM	75	55	No
10:00:00 AM	77	55	No
10:15:00 AM	75	55	No
10:30:00 AM	75	55	No
10:45:00 AM	75	55	No
11:00:00 AM	76	55	No
11:15:00 AM	76	55	No
11:30:00 AM	75	55	No
11:45:00 AM	76	55	No
12:00:00 PM	76	55	No
12:15:00 PM	76	55	No
12:30:00 PM	76	55	No
12:45:00 PM	77	55	No
1:00:00 PM	76	55	No
1:15:00 PM	76	55	No
1:30:00 PM	74	55	No
1:45:00 PM	77	55	No
2:00:00 PM	74	55	No
2:15:00 PM	75	55	No

RD16 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:30:00 PM	74	55	No
2:45:00 PM	75	55	No
3:00:00 PM	78	55	No
3:15:00 PM	75	55	No
3:30:00 PM	75	55	No
3:45:00 PM	75	55	No
4:00:00 PM	77	55	No
4:15:00 PM	76	55	No
4:30:00 PM	74	55	No
4:45:00 PM	76	55	No
5:00:00 PM	74	55	No
5:15:00 PM	76	55	No
5:30:00 PM	76	55	No
5:45:00 PM	76	55	No
6:00:00 PM	77	55	No
6:15:00 PM	75	55	No
6:30:00 PM	83	55	No
6:45:00 PM	78	55	No
7:00:00 PM	75	55	No
7:15:00 PM	74	55	No
7:30:00 PM	76	55	No
7:45:00 PM	77	55	No
8:00:00 PM	84	55	No
8:15:00 PM	75	55	No
8:30:00 PM	76	55	No
8:45:00 PM	76	55	No
9:00:00 PM	75	55	No
9:15:00 PM	75	55	No
9:30:00 PM	75	55	No
9:45:00 PM	80	55	No
10:00:00 PM	74	55	No
10:15:00 PM	75	55	No
10:30:00 PM	76	55	No
10:45:00 PM	74	55	No
11:00:00 PM	71	55	No
11:15:00 PM	73	55	No
11:30:00 PM	70	55	No
11:45:00 PM	76	55	No

RD16 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	70	55	No
12:15:00 AM	73	55	No
12:30:00 AM	73	55	No
12:45:00 AM	71	55	No
1:00:00 AM	68	55	No
1:15:00 AM	69	55	No
1:30:00 AM	77	55	No
1:45:00 AM	67	55	No
2:00:00 AM	74	55	No
2:15:00 AM	80	55	No
2:30:00 AM	72	55	No
2:45:00 AM	72	55	No
3:00:00 AM	77	55	No
3:15:00 AM	77	55	No
3:30:00 AM	73	55	No
3:45:00 AM	68	55	No
4:00:00 AM	75	55	No
4:15:00 AM	71	55	No
4:30:00 AM	72	55	No
4:45:00 AM	72	55	No
5:00:00 AM	62	55	No
5:15:00 AM	64	55	No
5:30:00 AM	66	55	No
5:45:00 AM	68	55	No
6:00:00 AM	64	55	No
6:15:00 AM	74	55	No
6:30:00 AM	68	55	No
6:45:00 AM	69	55	No
7:00:00 AM	68	55	No
7:15:00 AM	69	55	No
7:30:00 AM	70	55	No
7:45:00 AM	69	55	No
8:00:00 AM	73	55	No
8:15:00 AM	69	55	No
8:30:00 AM	72	55	No
8:45:00 AM	71	55	No
9:00:00 AM	71	55	No
9:15:00 AM	71	55	No
9:30:00 AM	72	55	No
9:45:00 AM	73	55	No
10:00:00 AM	73	55	No
10:15:00 AM	75	55	No
10:30:00 AM	74	55	No
10:45:00 AM	75	55	No
11:00:00 AM	71	55	No
11:15:00 AM	71	55	No
11:30:00 AM	72	55	No
11:45:00 AM	74	55	No
12:00:00 PM	74	55	No
12:15:00 PM	72	55	No
12:30:00 PM	73	55	No
12:45:00 PM	75	55	No
1:00:00 PM	74	55	No
1:15:00 PM	74	55	No
1:30:00 PM	74	55	No
1:45:00 PM	74	55	No
2:00:00 PM	75	55	No

RD16 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	74	55	No
2:30:00 PM	73	55	No
2:45:00 PM	72	55	No
3:00:00 PM	74	55	No
3:15:00 PM	73	55	No
3:30:00 PM	72	55	No
3:45:00 PM	72	55	No
4:00:00 PM	75	55	No
4:15:00 PM	75	55	No
4:30:00 PM	73	55	No
4:45:00 PM	74	55	No
5:00:00 PM	73	55	No
5:15:00 PM	74	55	No
5:30:00 PM	73	55	No
5:45:00 PM	73	55	No
6:00:00 PM	71	55	No
6:15:00 PM	73	55	No
6:30:00 PM	72	55	No
6:45:00 PM	75	55	No
7:00:00 PM	74	55	No
7:15:00 PM	74	55	No
7:30:00 PM	75	55	No
7:45:00 PM	74	55	No
8:00:00 PM	74	55	No
8:15:00 PM	75	55	No
8:30:00 PM	75	55	No
8:45:00 PM	76	55	No
9:00:00 PM	75	55	No
9:15:00 PM	76	55	No
9:30:00 PM	75	55	No
9:45:00 PM	75	55	No
10:00:00 PM	77	55	No
10:15:00 PM	76	55	No
10:30:00 PM	73	55	No
10:45:00 PM	75	55	No
11:00:00 PM	73	55	No
11:15:00 PM	75	55	No
11:30:00 PM	72	55	No
11:45:00 PM	73	55	No

**MTA PURPLE LINE SECTION 2 PROJECT
NOISE CONTROL PLAN MOA CONDITIONS
Wilshire/Rodeo Station Entrance Excavation**



November 4, 2020

Submitted by:



Engineered Solutions

Submitted to:

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1. Introduction

The aim of this study is to analyze and predict the construction noise levels during excavation at Station Entrance and hauling operations at Wilshire/Reeves. The excavation site is located directly in front of staging yard at 9430 Wilshire Blvd. The site is surrounded by high rise office spaces alongside Wilshire Blvd. The residential buildings are located to the east and south of the excavation site. Commercial structures are located to the south as well as north across Wilshire Blvd.

2. Construction Schedule

The excavation work will start in second week of June 2020.

3. SoundPLAN

The sound model for the excavation was developed for continuous noise generation during the daily work shifts. *SoundPLAN* was configured with settings outlined in Table 1. The noise modelling was performed using *SoundPLAN* version 8.1, which calculates outdoor noise propagation based upon the methodology specified in ISO 9613 -2.

Table 1 *SoundPLAN* Noise Prediction Model Settings

Prediction Model:	ISO 9613 -2 "Acoustics -- Attenuation of sound during propagation outdoors -- Part 2: General method of calculation", 1993
Air absorption:	ISO 9613-1 "Acoustics -- Attenuation of sound during propagation outdoors -- Part 1: Calculation of the absorption of sound by the atmosphere"
Environment:	
Air pressure	1013 mbar
rel. Humidity	70%
Temperature	25 °C = 77 °F
Maximum Screening Loss:	
Assessment:	Leq
Frequency Weighting:	dBA
Ground:	Reflective Ground $g=0$

Note:

- The accuracy of a noise model depends on several parameters such as source input (sound power level, spectral content, operation consideration), modeling standard settings, and noise prediction parameters.
- The excavation area was modeled using the *SoundPLAN* noise modeling software. The prediction uses the ISO 9613 -2 [Acoustics -- attenuation of sound during propagation outdoors -- Part 2: General Method of Calculation", 1993] prediction standard. *SoundPLAN* follows and meets the requirements developed for quality assurance of software implementation of ISO 9613-2 [ISO 175343 Acoustics -- software for the calculation of sound outdoors -- Part 3: Recommendations for quality assured implementation of ISO 9613-2].
- The ISO 9613-2 standard was developed with slight downwind and inversion condition which typically overpredicts than under-predict the noise levels. The FHWA emission data do also tend to be conservative and overestimate the equipment noise generation.
- Regarding the overall predicted sound level, the model assumes that all equipment operates at the same time, which is a conservative prediction process.
- The equipment sound power level inputs were based on measured data provided by TPOG, Specification 01 56 19 and data published by FHWA - Table 1. Construction Equipment Noise Emission Levels (https://ops.fhwa.dot.gov/wz/workshops/accessible/Schexnayder_paper.htm). The FHWA data typically does not reflect the newest noise control technology and provide a conservative assessment with higher input sound power levels.



4. Noise Control Plan

The noise control plan was developed based on the situation below:

- Excavation and Hauling operational for 24 hours/day.
- Excavation site is surrounded by variable height of Noise Barrier ranging from 20 ft to 10.75 ft.

It should be noted that if the excavation location is modified or addition locations are added, further updated noise control plans will be provided. Also, the noise control plan will be updated quarterly.

4.1 Construction Equipment

Construction equipment list shown in Table 2 was used for the model development. Please refer to Table 2 for the equipment specification,

Table 2. Sound Power Levels

Name (Source Height)	Lw (dbA)	Noise Levels @ 50 ft (dbA)	Utilization
Dump Trucks (Height 12 ft)	105	75	66%
Haul Route (Height 12ft, Speed 20mph)	105	75	Noise Exposure -10%***
Excavators (Height 8 ft)	109	79	80%
Ventilation Fan (Height 3ft)	112	82	100%
Ventilation Metal Grate -- Modeled as two separate point sources* (At ground Elev)	89	59	100%

- Note: Noise Levels at 50 ft were provided by TPOG, Equipment are not subjected to requirements beyond specification 01 56 19
- *Noise Power Levels for Metal grate was calculated by using the Noise Measurement Data provided by Metro, Noise Silencer was used to reduce the noise from the intake, see Appendix
- Please refer to Appendix C for Noise Certification. *** Equipment Noise Certification for ventilation fans is attached in Appendix.
- Note: The sound Power Levels were calculated from the Noise Levels @50 ft as shown in the table below ($L_w = L_{50} + 20 \log (50 \times 0.3048) + 8$)
- ***The Noise Exposure from Haul route is calculated at 20 mph. The trucks are anticipated to pass the sensitive receivers every 5 minutes, creating noise exposure of 30 seconds for each receiver for 5 minute period or 90 seconds every 15 mins or 10%.

4.2 Site Plan and Discussions

The Baseline Model for situation is shown Figure 1, it includes all equipment that would be operational during excavation. Noise Barrier (NRC=0.85) is indicated as blue boundary. The Noise Barrier is positioned as a continuous wall; Noise barrier height is indicated on figure 1.

Noise Sensitive locations as per MOA conditions are shown in Figure 2. The residential buildings are shown in blue; hotels are shown as light green; and commercial buildings are striped. The buildings were modeled at their full height; varying floor heights were identified.

To make the model conservative, Excavator was modeled as an area source. The Truck Haul Route was added as a line source whereas use of the Dump Truck was modeled as a point source. The Utilization factors for Excavator is taken to be 80 %. The sound power level used for the excavator are based on the



field measurement of the sound levels at 50 ft (see appendix for certificate). The excavator is not to exceed 79 dBA noise levels at 50 ft during the construction operation as indicated on the certificate.

Note that *Sound Plan* includes functionality to calculate the effective noise power levels from Stationary Noise Levels and the speed of the Line Noise Source. The noise exposure from the haul route will be around 90 seconds for 15 minutes interval considering 30 seconds exposure during each 5 minutes dump cycle.

Along with the Haul Route, excavator, and dump trucks a ventilation fan was also added in the noise control plan at Canon Yard. A 20ft high noise wall is installed around the Canon Yard, also shown in green in Figure 2. An additional 14 feet high noise wall was modeled around the Ventilation Fan as shown in figure 1. The maximum operational noise value for the ventilation fans shall be 82 dBA at 50 feet per the noise certificate attached in the appendix.

Ventilation intake located at Wilshire/Beverly Dr. was also included in the noise model. The Sound Power Levels for the Ventilation grate were calculated from the noise measurement provided by Metro (see Appendix). The ventilation intake was modeled as two-point source to match the noise profile provided by the measurement results.

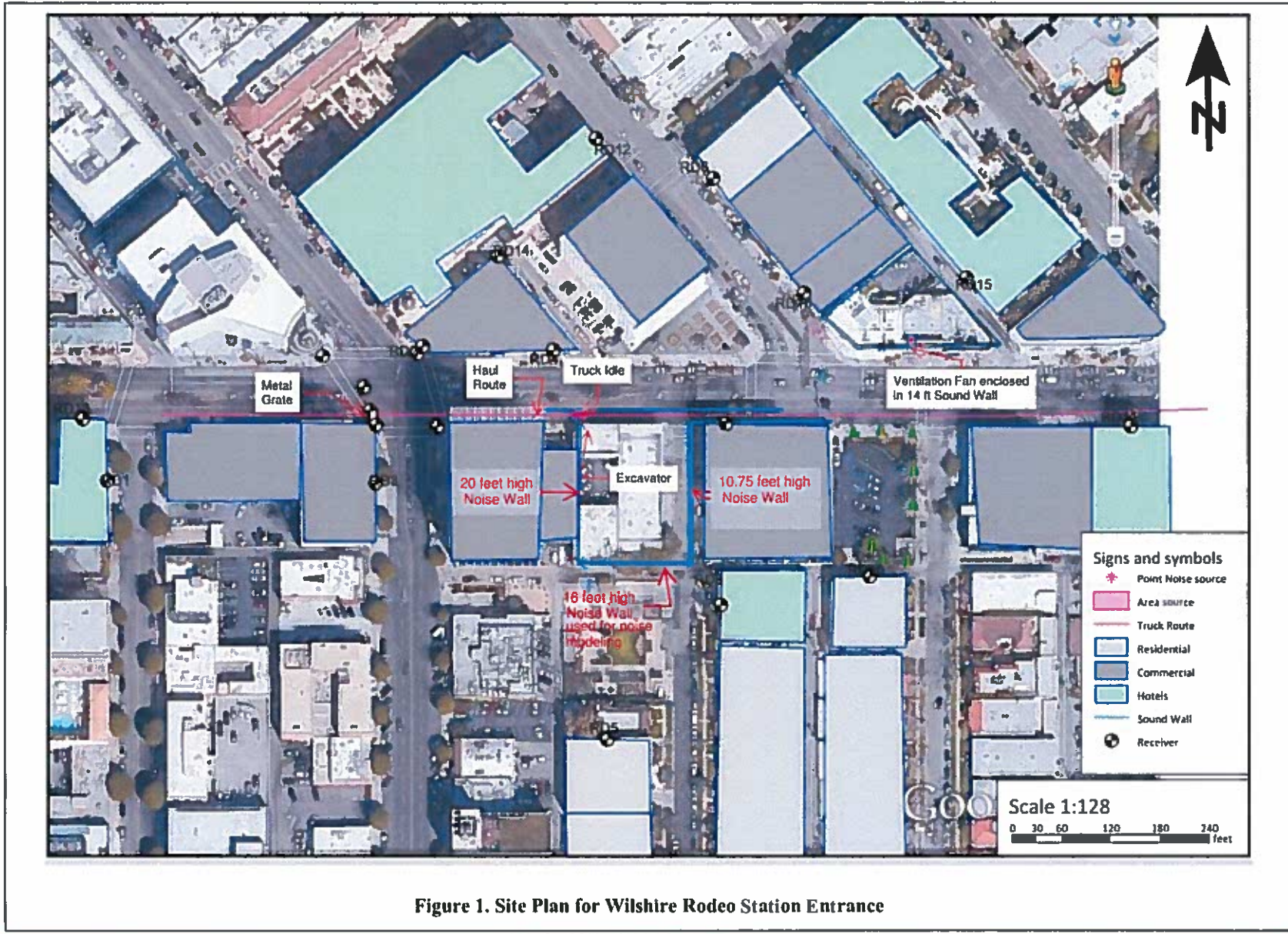




Figure 2. Sensitive Noise Locations around Wilshire Rodeo Station Excavation



4.3 Results and Observations

Noise predictions for 24 h are presented in Appendix B. Threshold limits at the receivers established by CSDA are used for comparing predicted noise levels. As Excavator noise levels were reduced as per report attached in Appendix A.

No Exceedances were predicted for the planned construction work except for Receptor RD-5 when working during weekend between 5:15 AM and 5:30 AM where the threshold is 54 dBA and the predicted noise is 55dBA.

The aforementioned exceedance shall be eliminated by switching off dump trucks for 15 minutes interval starting at 5:15 AM when working during weekends. This will reduce the predicted noise at RD-5 to 52 dBA. The updated results for RD-5 are shown in Appendix D.

Noise from a construction activity and/or construction equipment shall comply with all noise requirements identified in Article XIV of the MOA, which includes the Lmax noise limits. If the activity, the equipment in use and/or the sound enclosure for the equipment are modified or the equipment is operated at a location not identified in the noise control plan, the noise control plan shall be revised to address the changed conditions and resubmitted to the City for review and approval. The use of non-compliant equipment and/or engaging in a construction activity that exceeds the MOA identified noise limits including Lmax noise level shall not continue until the City approves a noise control plan revision and/or the implementation of noise mitigation to ensure that the equipment complies with noise limits identified in Article XIV.

5. Mitigation Measures

Based on the simulations following mitigation measures will be taken:

- 1) Excavation area will be surrounded by variable height Noise Barrier as discussed in previous sections (NRC= 0.85).
- 2) If noise levels exceed during nighttime equipment utilization will be reduced to meet the threshold.
- 3) If during noise monitoring Lmax level exceeds the threshold value following actions will be taken:
 1. Contractor shall switch equipment to meet noise requirements. OR
 2. Contractor shall modify work hours to meet noise requirements. OR
 3. Contractor shall use other available noise reduction measures.
- 4) To reduce noise levels at Wilshire / Beverly intake grate, install additional silencer at each intake fan, see Appendix C for silencer product data



APPENDIX A - Excavator Noise Certificate



Los Angeles County Metropolitan Transportation Authority
Westside Purple Line Extension Project, Section 2

FIGURE 3

EQUIPMENT NOISE LEVEL DATA REPORTING FORM

APPLICATION FOR CERTIFICATE OF EQUIPMENT NOISE COMPLIANCE

Contractor Name: TPOGJV
Contract Name & Number: Tutor Perini and O&G JV,

Equipment Type: Excavator
Manufacturer & Model Number: CAT 390
Identification Number: FHHNG00186
Rated Power & Capacity: 406 HP
Operating Condition During Test: Good- (Noise Reduction Measures)

Measured Sound Levels at 20 to 50 feet:

Measured Values and Distance:

Right Side: 78.4 dBA (SLOW), at 50 feet
Left Side: 79 dBA (SLOW), at 50 feet

Estimated Values at 50-Foot Distance:

Right Side: _____ dBA (SLOW).
Left Side: _____ dBA (SLOW).

Maximum Values Allowed for this Equipment: 81 (As per Specs 01 55 19) dBA (SLOW) at 50 feet.

If equipment sound level exceeds maximum value allowed, indicate action taken to achieve compliance:

Name, Address & Phone No. of Acoustical Engineer: Dr. Dots Oyenuqa, 3767 Overland Avenue, Los Angeles 90034, Suite 115, +1 -510 207 1387

Authorized Signature: [Signature] Date: 6/12/20
CONTRACTOR'S APPROVAL:
Authorized Signature: _____ Date: _____
ENGINEER'S CONCURRENCE:
Authorized Signature: _____ Date: _____

APPENDIX B – Ventilation Fan Noise Certificate



EQUIPMENT NOISE LEVEL DATA REPORTING FORM

APPLICATION FOR CERTIFICATE OF EQUIPMENT NOISE COMPLIANCE

Contractor Name: TPOG
 Contract Name & Number: MTA Purple line Extension 2 , C1120

Equipment Type: Ventilation Fan
 Manufacturer & Model Number: R-5300-B-SS-XP
 Identification Number: 300 HP
 Rated Power & Capacity: _____
 Operating Condition During Test: Sunny, Clear Sky

Measured Sound Levels at 20 to 50 feet:

Measured Values and Distance: There were obstructions blocking the right side of the ventilation fans, as a result of which the noise level for right side is lower than the left.

Right Side: 76.4 dBA (SLOW), at 50 feet
 Left Side: 82.4 dBA (SLOW), at 50 feet

Estimated Values at 50-Foot Distance:

Right Side: _____ dBA (SLOW).
 Left Side: _____ dBA (SLOW).

Maximum Values Allowed for this Equipment: 85 dBA (SLOW) at 50 feet.

Note: Equipment was operated at maximum governed rpm under full load conditions during the tests. All tests were performed under the supervision of the Acoustical Engineer.

If equipment sound level exceeds maximum value allowed, indicate action taken to achieve compliance:

Name, Address & Phone No. of Acoustical Engineer: Dr. Dots Oyenuga, 3767 Overland Avenue, Suite # 115, (510) 207 1387

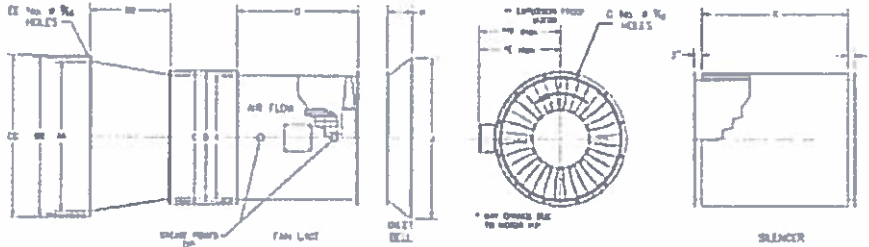
Authorized Signature: _____ Date: 02/20/20
 CONTRACTOR'S APPROVAL:
 Authorized Signature: _____ Date: _____
 ENGINEER'S CONCURRENCE:
 Authorized Signature: _____ Date: _____



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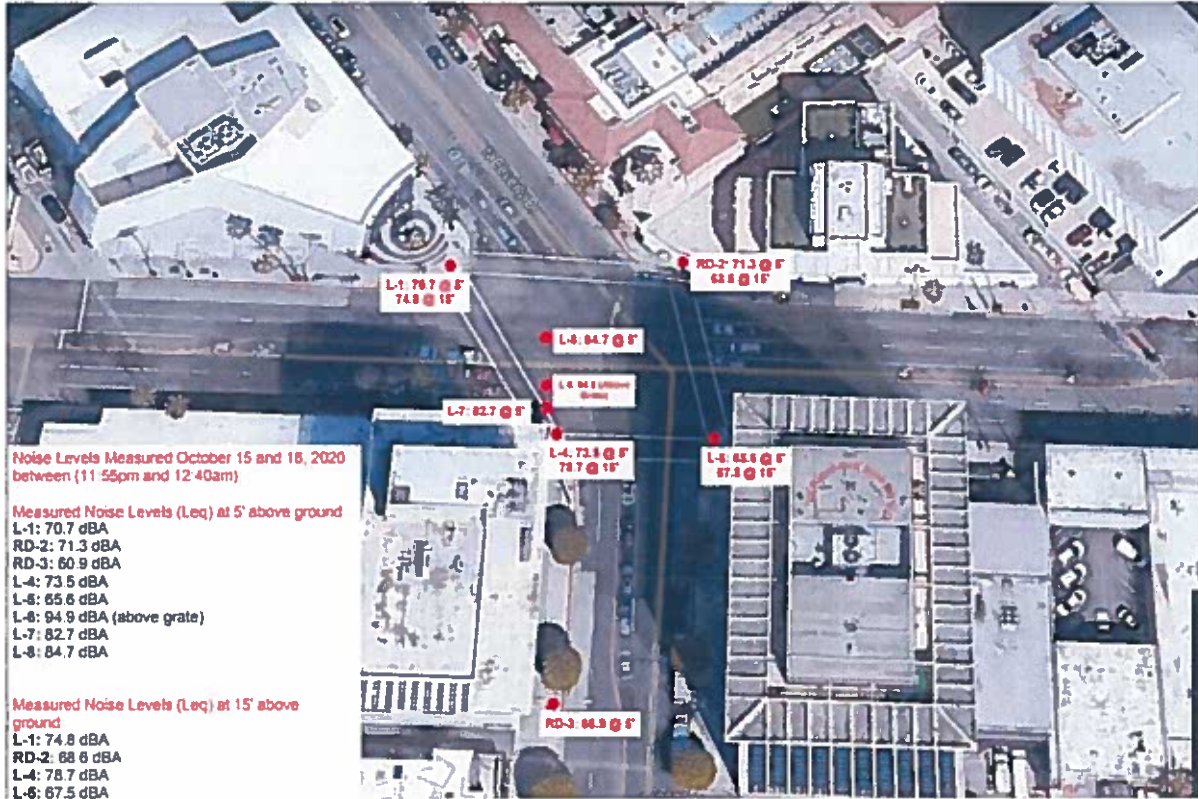
SINGLE STAGE FAN WITH ADJUSTABLE PITCH

FAN No.	PLATE No.	SHROUDED No.
40-1000-00	00	00
42-1000-00	00	00
44-1000-00	00	00

CASE DIA	DIMENSIONS (INCHES)																	
	FAN UNIT									INLET/OUTLET CONE				INLET BELL		SILENCER		CASE DIA
	Please set for Dia. P									AA	BB	CC	DD	EE	FF	GG	HH	
Wt	HP	CFM	PM	B	C	D	E	G	AA	BB	CC	DD	EE	FF	GG	HH		
18	2-1/2	3000	14	18.75	21.25	29	17	12	27	23.75	20.25	17	12	4	23.50	20	18	
21 1/2	10-10	2700	17	23.50	26.50	30	19	12	29	27.75	20.25	14	12	4.50	27.50	22	21.50	
23 1/2	8-10	3500	14 1/2	23.50	26.50	30	20	12	29	29.50	21.50	14	12	8	29.50	24	23.50	
25 1/2	10-10	3000	14 1/2	27.50	29.50	30	21	12	30	30.75	23.50	14	12	8.50	30.50	24	23.50	
27 1/2	20-20	2700	14 1/2	29.50	30.50	30	22	12	30	31.75	24.50	14	12	8	31.50	24	23.50	
29 1/2	20-20	3000	14 1/2	31.50	32.50	30	23	12	30	32.75	25.50	14	12	8.50	32.50	24	23.50	
31 1/2	40-40	3000	17 1/2	33.50	34.50	30	24	12	30	33.75	26.50	14	12	8.50	33.50	24	23.50	
33	75-125	3000	17 1/2	35.50	36.50	30	25	12	30	34.75	27.50	14	12	8	34.50	24	23.50	
34	40-60	3000	17 1/2	36.50	37.50	30	25.50	12	30	35.75	28.50	14	12	8.50	35.50	24	23.50	
35	20-20	3000	17 1/2	37.50	38.50	30	26	12	30	36.75	29.50	14	12	8.50	36.50	24	23.50	
36	40-100	3000	17 1/2	38.50	39.50	30	26.50	12	30	37.75	30.50	14	12	8	37.50	24	23.50	
37 1/2	40-100	3000	17 1/2	39.50	40.50	30	27	12	30	38.75	31.50	14	12	8	38.50	24	23.50	
39	80-100	3000	17 1/2	40.50	41.50	30	27.50	12	30	39.75	32.50	14	12	8.50	39.50	24	23.50	
41 1/2	80-100	3000	17 1/2	41.50	42.50	30	28	12	30	40.75	33.50	14	12	8.50	40.50	24	23.50	
43	80-100	3000	17 1/2	42.50	43.50	30	28.50	12	30	41.75	34.50	14	12	8.50	41.50	24	23.50	
44	80-100	3000	17 1/2	43.50	44.50	30	29	12	30	42.75	35.50	14	12	8.50	42.50	24	23.50	
45	80-100	3000	17 1/2	44.50	45.50	30	29.50	12	30	43.75	36.50	14	12	8.50	43.50	24	23.50	
46	80-100	3000	17 1/2	45.50	46.50	30	30	12	30	44.75	37.50	14	12	8.50	44.50	24	23.50	
47 1/2	80-100	3000	17 1/2	46.50	47.50	30	30.50	12	30	45.75	38.50	14	12	8.50	45.50	24	23.50	
48	80-100	3000	17 1/2	47.50	48.50	30	31	12	30	46.75	39.50	14	12	8.50	46.50	24	23.50	
49	80-100	3000	17 1/2	48.50	49.50	30	31.50	12	30	47.75	40.50	14	12	8.50	47.50	24	23.50	
50	80-100	3000	17 1/2	49.50	50.50	30	32	12	30	48.75	41.50	14	12	8.50	48.50	24	23.50	
51	80-100	3000	17 1/2	50.50	51.50	30	32.50	12	30	49.75	42.50	14	12	8.50	49.50	24	23.50	
52	80-100	3000	17 1/2	51.50	52.50	30	33	12	30	50.75	43.50	14	12	8.50	50.50	24	23.50	
53	80-100	3000	17 1/2	52.50	53.50	30	33.50	12	30	51.75	44.50	14	12	8.50	51.50	24	23.50	
54	80-100	3000	17 1/2	53.50	54.50	30	34	12	30	52.75	45.50	14	12	8.50	52.50	24	23.50	
55	80-100	3000	17 1/2	54.50	55.50	30	34.50	12	30	53.75	46.50	14	12	8.50	53.50	24	23.50	
56	80-100	3000	17 1/2	55.50	56.50	30	35	12	30	54.75	47.50	14	12	8.50	54.50	24	23.50	
57	80-100	3000	17 1/2	56.50	57.50	30	35.50	12	30	55.75	48.50	14	12	8.50	55.50	24	23.50	
58	80-100	3000	17 1/2	57.50	58.50	30	36	12	30	56.75	49.50	14	12	8.50	56.50	24	23.50	
59	80-100	3000	17 1/2	58.50	59.50	30	36.50	12	30	57.75	50.50	14	12	8.50	57.50	24	23.50	
60	80-100	3000	17 1/2	59.50	60.50	30	37	12	30	58.75	51.50	14	12	8.50	58.50	24	23.50	
61	80-100	3000	17 1/2	60.50	61.50	30	37.50	12	30	59.75	52.50	14	12	8.50	59.50	24	23.50	
62	80-100	3000	17 1/2	61.50	62.50	30	38	12	30	60.75	53.50	14	12	8.50	60.50	24	23.50	
63	80-100	3000	17 1/2	62.50	63.50	30	38.50	12	30	61.75	54.50	14	12	8.50	61.50	24	23.50	
64	80-100	3000	17 1/2	63.50	64.50	30	39	12	30	62.75	55.50	14	12	8.50	62.50	24	23.50	
65	80-100	3000	17 1/2	64.50	65.50	30	39.50	12	30	63.75	56.50	14	12	8.50	63.50	24	23.50	
66	80-100	3000	17 1/2	65.50	66.50	30	40	12	30	64.75	57.50	14	12	8.50	64.50	24	23.50	
67	80-100	3000	17 1/2	66.50	67.50	30	40.50	12	30	65.75	58.50	14	12	8.50	65.50	24	23.50	
68	80-100	3000	17 1/2	67.50	68.50	30	41	12	30	66.75	59.50	14	12	8.50	66.50	24	23.50	
69	80-100	3000	17 1/2	68.50	69.50	30	41.50	12	30	67.75	60.50	14	12	8.50	67.50	24	23.50	
70	80-100	3000	17 1/2	69.50	70.50	30	42	12	30	68.75	61.50	14	12	8.50	68.50	24	23.50	
71	80-100	3000	17 1/2	70.50	71.50	30	42.50	12	30	69.75	62.50	14	12	8.50	69.50	24	23.50	
72	80-100	3000	17 1/2	71.50	72.50	30	43	12	30	70.75	63.50	14	12	8.50	70.50	24	23.50	
73	80-100	3000	17 1/2	72.50	73.50	30	43.50	12	30	71.75	64.50	14	12	8.50	71.50	24	23.50	
74	80-100	3000	17 1/2	73.50	74.50	30	44	12	30	72.75	65.50	14	12	8.50	72.50	24	23.50	
75	80-100	3000	17 1/2	74.50	75.50	30	44.50	12	30	73.75	66.50	14	12	8.50	73.50	24	23.50	
76	80-100	3000	17 1/2	75.50	76.50	30	45	12	30	74.75	67.50	14	12	8.50	74.50	24	23.50	
77	80-100	3000	17 1/2	76.50	77.50	30	45.50	12	30	75.75	68.50	14	12	8.50	75.50	24	23.50	
78	80-100	3000	17 1/2	77.50	78.50	30	46	12	30	76.75	69.50	14	12	8.50	76.50	24	23.50	
79	80-100	3000	17 1/2	78.50	79.50	30	46.50	12	30	77.75	70.50	14	12	8.50	77.50	24	23.50	
80	80-100	3000	17 1/2	79.50	80.50	30	47	12	30	78.75	71.50	14	12	8.50	78.50	24	23.50	
81	80-100	3000	17 1/2	80.50	81.50	30	47.50	12	30	79.75	72.50	14	12	8.50	79.50	24	23.50	
82	80-100	3000	17 1/2	81.50	82.50	30	48	12	30	80.75	73.50	14	12	8.50	80.50	24	23.50	
83	80-100	3000	17 1/2	82.50	83.50	30	48.50	12	30	81.75	74.50	14	12	8.50	81.50	24	23.50	
84	80-100	3000	17 1/2	83.50	84.50	30	49	12	30	82.75	75.50	14	12	8.50	82.50	24	23.50	
85	80-100	3000	17 1/2	84.50	85.50	30	49.50	12	30	83.75	76.50	14	12	8.50	83.50	24	23.50	
86	80-100	3000	17 1/2	85.50	86.50	30	50	12	30	84.75	77.50	14	12	8.50	84.50	24	23.50	
87	80-100	3000	17 1/2	86.50	87.50	30	50.50	12	30	85.75	78.50	14	12	8.50	85.50	24	23.50	
88	80-100	3000	17 1/2	87.50	88.50	30	51	12	30	86.75	79.50	14	12	8.50	86.50	24	23.50	
89	80-100	3000	17 1/2	88.50	89.50	30	51.50	12	30	87.75	80.50	14	12	8.50	87.50	24	23.50	
90	80-100	3000	17 1/2	89.50	90.50	30	52	12	30	88.75	81.50	14	12	8.50	88.50	24	23.50	
91	80-100	3000	17 1/2	90.50	91.50	30	5											

APPENDIX C – Ventilation Metal Grate Noise Measurement

Noise Measurement Data



Calculated Sound Power Level



Receiver Point	Leq
L-1 (5ft)	70.7
RD-2	68
RD-2 (15 ft)	70
RD-3	61.8
L-1 (15 ft)	74.8
L-4 (5ft)	75.3
L-4 (15 ft)	77.2
L-5 (5ft)	67.3
L-5 (15 ft)	69.6
L-6 (5ft)	100
L-7 (5ft)	81.5
L-8 (5ft)	84



Ventilation Intake Silencer- Product Data

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CIRCULAR DISSIPATIVE

CD

File No.: 03A-003 Date: 17 Sep 2013
 Supersedes: 03A-002 Date: 19 Aug 2013

QTY: 2	TAG: SA-1,SA-2		
Submitted for: Approval	Dwg #: 26170-1	Rev. #: 0	Drawn by: _____
Project: Metro PLE2		Customer: CSDA Design Group	Customer P.O. No. _____
V.A. Project No. 1142142	V.A. Project Manager _____	Consultant _____	

Performance for Model CD UHV F1

Airflow	Velocity	Pressure Drop	Pressure Drop w/ System Effects*	Dynamic Insertion Loss (dB)									
				63 Hz	125 Hz	250 Hz	500 Hz	1 KHz	2 KHz	4 KHz	8 KHz		
CFM (L/s)	FPM (m/s)	in.w.g. (Pa)	in.w.g. (Pa)										
51000 (24,162)	4050 (21)	0.03 (6)	0.04 (11)	0	11	14	13	8	7	5	4		

Silencer performance data has been obtained from tests conducted in a laboratory facility NVLAP accredited for the ASTM E477-06a test standard. * Duct configuration must be known for at least 5 duct diameters upstream and downstream of the silencer to determine pressure drop with system effects

Dimensions and Weights

Silencer Size (in/mm)				Total Wt
A	B	C	D	(lb/kg)
48	64	84	2	1,053

Construction

Casing	19 Ga (2.75 mm) Galvanized
	Continuously Welded
Perforated Liner	22 Ga (0.45 mm) Galvanized
Media Fill	Acoustic Grade Glass Fiber
Media Protection	None
End connections	2" (51 mm) slip connection
Accessories	None

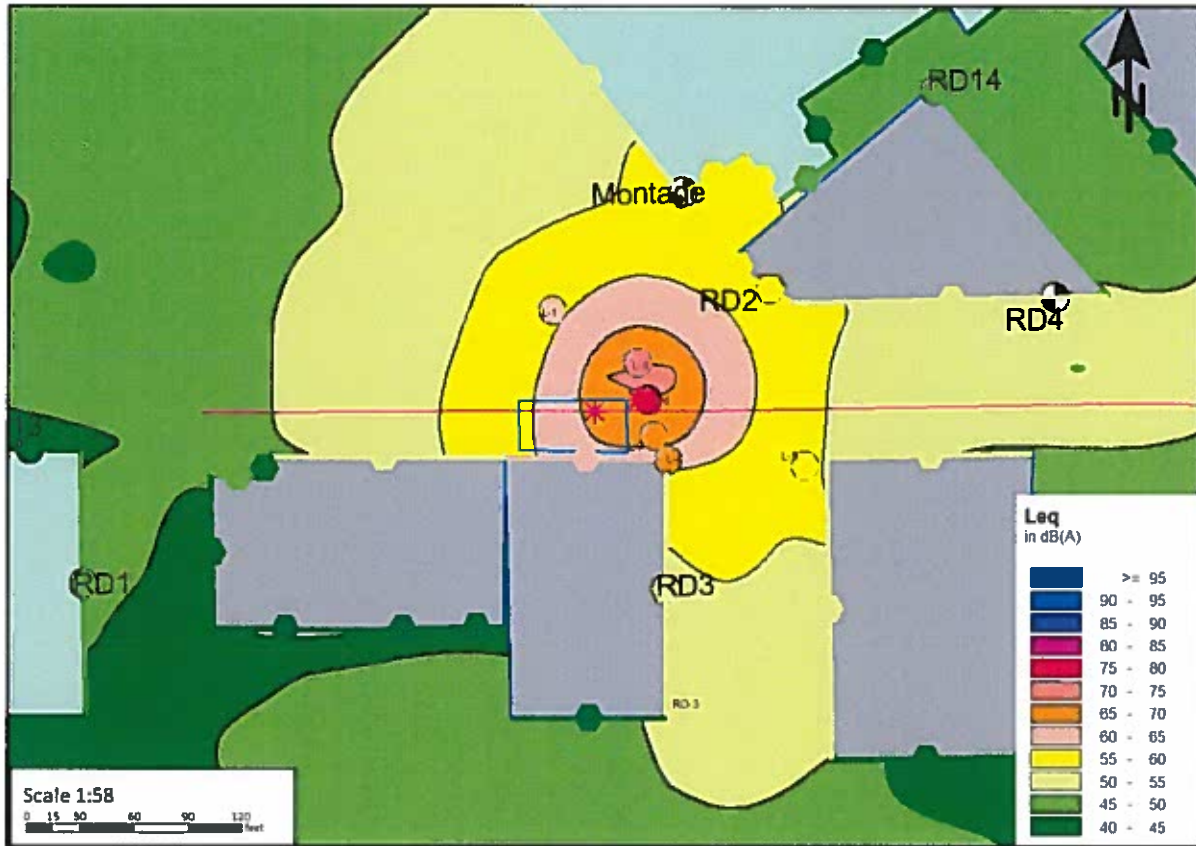
Ratings

Pressure rating	8 w.f.d. (102 Pa)
Combustion rating (ASTM E84 or CAN/ULC S102)	Flame spread classification - < 25
	Smoke development rating - < 50

Notes

- Customer to confirm all dimensions.
- Silencer construction meets applicable requirements of SMADNA Duct Construction Standards, ASHRAE 62.1, UL181, ASTM C1071, NFPA 90A and NFPA 90B.
- Lubricants and sealants used during manufacturing may contain silicone.
- Gauges and thicknesses are based on SMADNA standard nominal and will vary within prescribed tolerances.
- Electronic document links:
 - Disipative Straight Silencers
 - Installation Instructions / Operation & Maintenance
 - NVLAP Accreditation

Calculated Sound Power Level after using Noise Silencer for the Vent intake

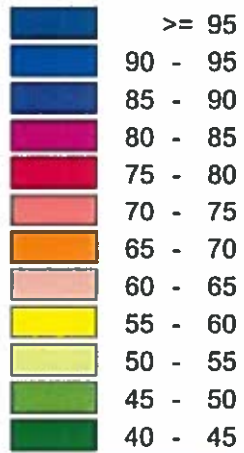


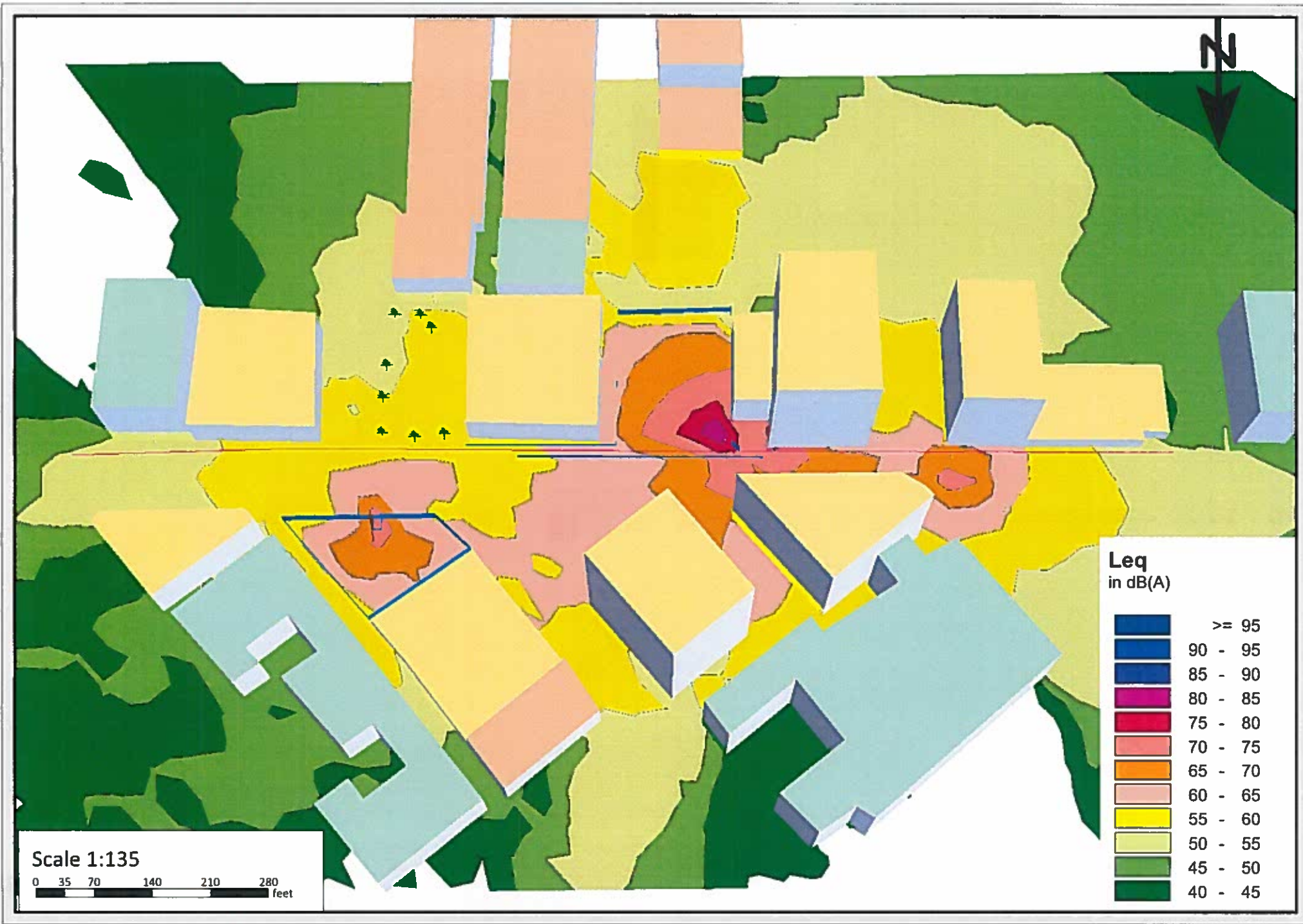
Receiver Point	Leq
L-1 (5ft)	59
RD-2	56
RD-2 (15 ft)	58
RD-3	50
L-1 (15 ft)	61
L-4 (5ft)	63.3
L-4 (15 ft)	66
L-5 (5ft)	56
L-5 (15 ft)	58
L-6 (5ft)	79
L-7 (5ft)	69
L-8 (5ft)	72.2

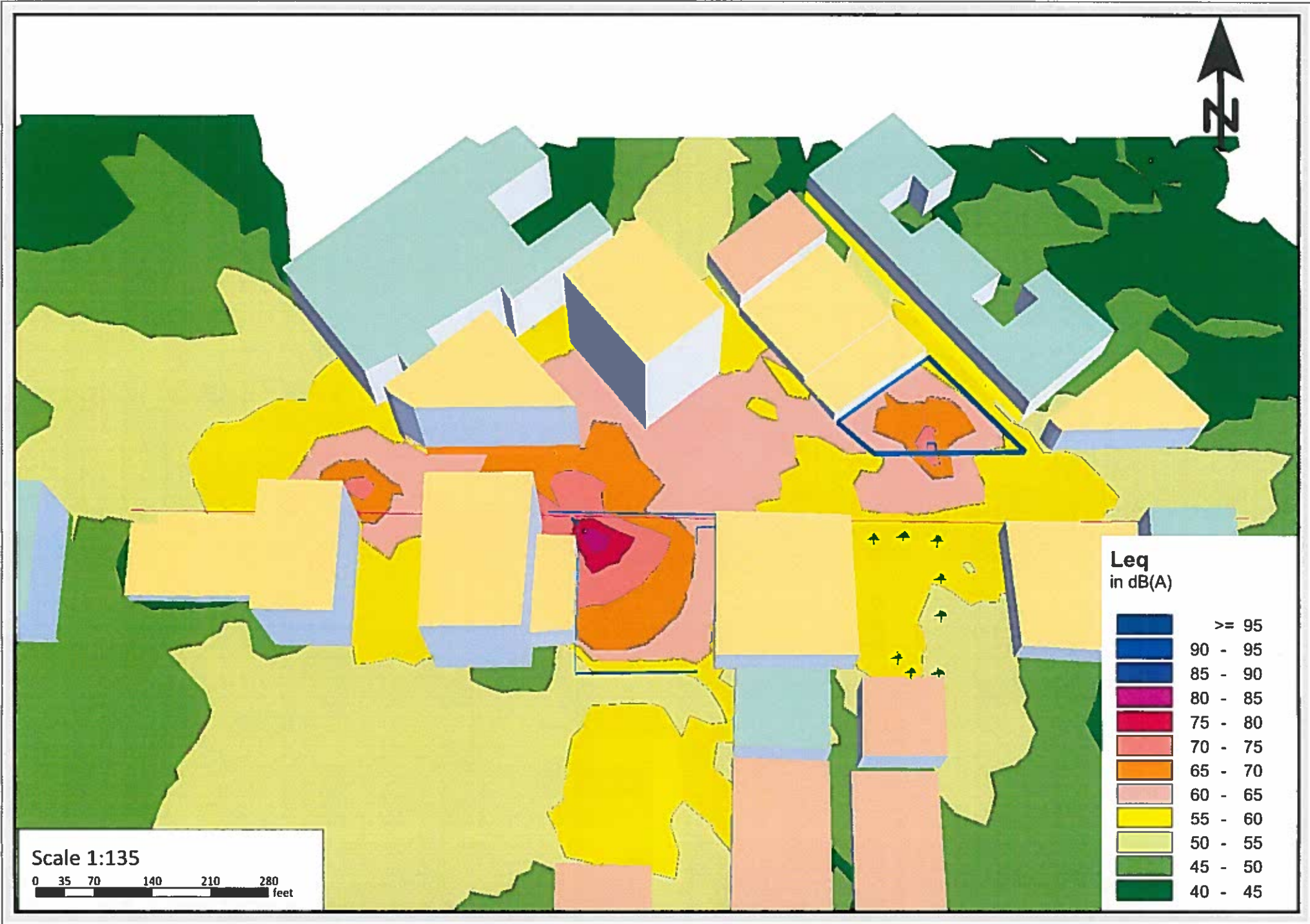


APPENDIX D - Noise Level Predictions

Leq
in dB(A)









Scale 1:135



RD 1 Weekday

Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	71	46	No
12:15:00 AM	70	46	No
12:30:00 AM	69	46	No
12:45:00 AM	69	46	No
1:00:00 AM	72	46	No
1:15:00 AM	68	46	No
1:30:00 AM	73	46	No
1:45:00 AM	70	46	No
2:00:00 AM	73	46	No
2:15:00 AM	67	46	No
2:30:00 AM	69	46	No
2:45:00 AM	68	46	No
3:00:00 AM	69	46	No
3:15:00 AM	70	46	No
3:30:00 AM	67	46	No
3:45:00 AM	67	46	No
4:00:00 AM	66	46	No
4:15:00 AM	70	46	No
4:30:00 AM	70	46	No
4:45:00 AM	71	46	No
5:00:00 AM	74	46	No
5:15:00 AM	74	46	No
5:30:00 AM	73	46	No
5:45:00 AM	72	46	No
6:00:00 AM	74	46	No
6:15:00 AM	76	46	No
6:30:00 AM	76	46	No
6:45:00 AM	76	46	No
7:00:00 AM	76	46	No
7:15:00 AM	75	46	No
7:30:00 AM	78	46	No
7:45:00 AM	76	46	No
8:00:00 AM	78	46	No
8:15:00 AM	77	46	No
8:30:00 AM	76	46	No
8:45:00 AM	76	46	No
9:00:00 AM	77	46	No
9:15:00 AM	86	46	No
9:30:00 AM	76	46	No
9:45:00 AM	76	46	No
10:00:00 AM	75	46	No
10:15:00 AM	76	46	No
10:30:00 AM	75	46	No
10:45:00 AM	74	46	No
11:00:00 AM	75	46	No
11:15:00 AM	75	46	No
11:30:00 AM	76	46	No
11:45:00 AM	75	46	No
12:00:00 PM	74	46	No
12:15:00 PM	75	46	No
12:30:00 PM	75	46	No
12:45:00 PM	75	46	No
1:00:00 PM	75	46	No
1:15:00 PM	77	46	No
1:30:00 PM	74	46	No
1:45:00 PM	83	46	No
2:00:00 PM	75	46	No
2:15:00 PM	74	46	No
2:30:00 PM	74	46	No

RD 1 Weekday			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:45:00 PM	74	46	No
3:00:00 PM	74	46	No
3:15:00 PM	75	46	No
3:30:00 PM	75	46	No
3:45:00 PM	74	46	No
4:00:00 PM	74	46	No
4:15:00 PM	75	46	No
4:30:00 PM	77	46	No
4:45:00 PM	75	46	No
5:00:00 PM	75	46	No
5:15:00 PM	81	46	No
5:30:00 PM	80	46	No
5:45:00 PM	80	46	No
6:00:00 PM	81	46	No
6:15:00 PM	74	46	No
6:30:00 PM	75	46	No
6:45:00 PM	81	46	No
7:00:00 PM	75	46	No
7:15:00 PM	77	46	No
7:30:00 PM	74	46	No
7:45:00 PM	74	46	No
8:00:00 PM	83	46	No
8:15:00 PM	75	46	No
8:30:00 PM	74	46	No
8:45:00 PM	75	46	No
9:00:00 PM	74	46	No
9:15:00 PM	75	46	No
9:30:00 PM	73	46	No
9:45:00 PM	75	46	No
10:00:00 PM	73	46	No
10:15:00 PM	73	46	No
10:30:00 PM	75	46	No
10:45:00 PM	72	46	No
11:00:00 PM	72	46	No
11:15:00 PM	73	46	No
11:30:00 PM	71	46	No
11:45:00 PM	71	46	No

RD1 Weekend			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	71	46	No
12:15:00 AM	70	46	No
12:30:00 AM	71	46	No
12:45:00 AM	70	46	No
1:00:00 AM	69	46	No
1:15:00 AM	70	46	No
1:30:00 AM	69	46	No
1:45:00 AM	68	46	No
2:00:00 AM	68	46	No
2:15:00 AM	72	46	No
2:30:00 AM	68	46	No
2:45:00 AM	69	46	No
3:00:00 AM	76	46	No
3:15:00 AM	67	46	No
3:30:00 AM	76	46	No
3:45:00 AM	66	46	No
4:00:00 AM	65	46	No
4:15:00 AM	69	46	No
4:30:00 AM	67	46	No
4:45:00 AM	70	46	No
5:00:00 AM	66	46	No
5:15:00 AM	67	46	No
5:30:00 AM	66	46	No
5:45:00 AM	68	46	No
6:00:00 AM	70	46	No
6:15:00 AM	70	46	No
6:30:00 AM	70	46	No
6:45:00 AM	70	46	No
7:00:00 AM	70	46	No
7:15:00 AM	70	46	No
7:30:00 AM	71	46	No
7:45:00 AM	71	46	No
8:00:00 AM	71	46	No
8:15:00 AM	72	46	No
8:30:00 AM	71	46	No
8:45:00 AM	71	46	No
9:00:00 AM	72	46	No
9:15:00 AM	72	46	No
9:30:00 AM	72	46	No
9:45:00 AM	73	46	No
10:00:00 AM	72	46	No
10:15:00 AM	72	46	No
10:30:00 AM	74	46	No
10:45:00 AM	73	46	No
11:00:00 AM	74	46	No
11:15:00 AM	74	46	No
11:30:00 AM	73	46	No
11:45:00 AM	84	46	No
12:00:00 PM	73	46	No
12:15:00 PM	74	46	No
12:30:00 PM	73	46	No
12:45:00 PM	73	46	No
1:00:00 PM	73	46	No
1:15:00 PM	72	46	No
1:30:00 PM	74	46	No
1:45:00 PM	73	46	No
2:00:00 PM	72	46	No

RDI Weekend			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	73	46	No
2:30:00 PM	73	46	No
2:45:00 PM	72	46	No
3:00:00 PM	82	46	No
3:15:00 PM	72	46	No
3:30:00 PM	72	46	No
3:45:00 PM	76	46	No
4:00:00 PM	78	46	No
4:15:00 PM	74	46	No
4:30:00 PM	73	46	No
4:45:00 PM	77	46	No
5:00:00 PM	73	46	No
5:15:00 PM	72	46	No
5:30:00 PM	72	46	No
5:45:00 PM	74	46	No
6:00:00 PM	73	46	No
6:15:00 PM	73	46	No
6:30:00 PM	76	46	No
6:45:00 PM	72	46	No
7:00:00 PM	74	46	No
7:15:00 PM	74	46	No
7:30:00 PM	74	46	No
7:45:00 PM	75	46	No
8:00:00 PM	74	46	No
8:15:00 PM	75	46	No
8:30:00 PM	76	46	No
8:45:00 PM	73	46	No
9:00:00 PM	75	46	No
9:15:00 PM	74	46	No
9:30:00 PM	75	46	No
9:45:00 PM	75	46	No
10:00:00 PM	72	46	No
10:15:00 PM	74	46	No
10:30:00 PM	73	46	No
10:45:00 PM	73	46	No
11:00:00 PM	72	46	No
11:15:00 PM	80	46	No
11:30:00 PM	75	46	No
11:45:00 PM	72	46	No

RD2 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	74	60	No
12:15:00 AM	75	60	No
12:30:00 AM	73	60	No
12:45:00 AM	83	60	No
1:00:00 AM	73	60	No
1:15:00 AM	71	60	No
1:30:00 AM	79	60	No
1:45:00 AM	80	60	No
2:00:00 AM	71	60	No
2:15:00 AM	73	60	No
2:30:00 AM	71	60	No
2:45:00 AM	70	60	No
3:00:00 AM	76	60	No
3:15:00 AM	73	60	No
3:30:00 AM	69	60	No
3:45:00 AM	71	60	No
4:00:00 AM	71	60	No
4:15:00 AM	71	60	No
4:30:00 AM	75	60	No
4:45:00 AM	74	60	No
5:00:00 AM	75	60	No
5:15:00 AM	75	60	No
5:30:00 AM	76	60	No
5:45:00 AM	77	60	No
6:00:00 AM	77	60	No
6:15:00 AM	79	60	No
6:30:00 AM	83	60	No
6:45:00 AM	80	60	No
7:00:00 AM	83	60	No
7:15:00 AM	80	60	No
7:30:00 AM	81	60	No
7:45:00 AM	82	60	No
8:00:00 AM	82	60	No
8:15:00 AM	80	60	No
8:30:00 AM	80	60	No
8:45:00 AM	81	60	No
9:00:00 AM	80	60	No
9:15:00 AM	81	60	No
9:30:00 AM	80	60	No
9:45:00 AM	80	60	No
10:00:00 AM	82	60	No
10:15:00 AM	80	60	No
10:30:00 AM	80	60	No
10:45:00 AM	80	60	No
11:00:00 AM	80	60	No
11:15:00 AM	79	60	No
11:30:00 AM	78	60	No
11:45:00 AM	79	60	No
12:00:00 PM	84	60	No
12:15:00 PM	81	60	No
12:30:00 PM	80	60	No
12:45:00 PM	79	60	No
1:00:00 PM	81	60	No
1:15:00 PM	80	60	No
1:30:00 PM	79	60	No
1:45:00 PM	80	60	No

RD2 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:00:00 PM	81	60	No
2:15:00 PM	79	60	No
2:30:00 PM	80	60	No
2:45:00 PM	80	60	No
3:00:00 PM	79	60	No
3:15:00 PM	79	60	No
3:30:00 PM	80	60	No
3:45:00 PM	80	60	No
4:00:00 PM	80	60	No
4:15:00 PM	78	60	No
4:30:00 PM	77	60	No
4:45:00 PM	79	60	No
5:00:00 PM	80	60	No
5:15:00 PM	81	60	No
5:30:00 PM	80	60	No
5:45:00 PM	80	60	No
6:00:00 PM	79	60	No
6:15:00 PM	78	60	No
6:30:00 PM	79	60	No
6:45:00 PM	79	60	No
7:00:00 PM	80	60	No
7:15:00 PM	78	60	No
7:30:00 PM	78	60	No
7:45:00 PM	78	60	No
8:00:00 PM	78	60	No
8:15:00 PM	79	60	No
8:30:00 PM	77	60	No
8:45:00 PM	80	60	No
9:00:00 PM	77	60	No
9:15:00 PM	78	60	No
9:30:00 PM	78	60	No
9:45:00 PM	77	60	No
10:00:00 PM	83	60	No
10:15:00 PM	78	60	No
10:30:00 PM	80	60	No
10:45:00 PM	76	60	No
11:00:00 PM	80	60	No
11:15:00 PM	78	60	No
11:30:00 PM	74	60	No
11:45:00 PM	74	60	No

RD2 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	81	60	No
12:15:00 AM	73	60	No
12:30:00 AM	74	60	No
12:45:00 AM	72	60	No
1:00:00 AM	71	60	No
1:15:00 AM	72	60	No
1:30:00 AM	72	60	No
1:45:00 AM	71	60	No
2:00:00 AM	71	60	No
2:15:00 AM	76	60	No
2:30:00 AM	74	60	No
2:45:00 AM	80	60	No
3:00:00 AM	75	60	No
3:15:00 AM	70	60	No
3:30:00 AM	70	60	No
3:45:00 AM	69	60	No
4:00:00 AM	67	60	No
4:15:00 AM	69	60	No
4:30:00 AM	69	60	No
4:45:00 AM	72	60	No
5:00:00 AM	67	60	No
5:15:00 AM	66	60	No
5:30:00 AM	71	60	No
5:45:00 AM	72	60	No
6:00:00 AM	70	60	No
6:15:00 AM	70	60	No
6:30:00 AM	71	60	No
6:45:00 AM	73	60	No
7:00:00 AM	81	60	No
7:15:00 AM	73	60	No
7:30:00 AM	74	60	No
7:45:00 AM	74	60	No
8:00:00 AM	75	60	No
8:15:00 AM	76	60	No
8:30:00 AM	76	60	No
8:45:00 AM	75	60	No
9:00:00 AM	75	60	No
9:15:00 AM	76	60	No
9:30:00 AM	76	60	No
9:45:00 AM	77	60	No
10:00:00 AM	76	60	No
10:15:00 AM	80	60	No
10:30:00 AM	77	60	No
10:45:00 AM	76	60	No
11:00:00 AM	77	60	No
11:15:00 AM	77	60	No
11:30:00 AM	78	60	No
11:45:00 AM	80	60	No
12:00:00 PM	78	60	No
12:15:00 PM	77	60	No
12:30:00 PM	79	60	No
12:45:00 PM	79	60	No
1:00:00 PM	78	60	No
1:15:00 PM	77	60	No
1:30:00 PM	76	60	No
1:45:00 PM	77	60	No

RD2 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:00:00 PM	77	60	No
2:15:00 PM	84	60	No
2:30:00 PM	78	60	No
2:45:00 PM	79	60	No
3:00:00 PM	85	60	No
3:15:00 PM	78	60	No
3:30:00 PM	77	60	No
3:45:00 PM	77	60	No
4:00:00 PM	81	60	No
4:15:00 PM	78	60	No
4:30:00 PM	79	60	No
4:45:00 PM	79	60	No
5:00:00 PM	79	60	No
5:15:00 PM	77	60	No
5:30:00 PM	77	60	No
5:45:00 PM	81	60	No
6:00:00 PM	77	60	No
6:15:00 PM	78	60	No
6:30:00 PM	76	60	No
6:45:00 PM	76	60	No
7:00:00 PM	78	60	No
7:15:00 PM	78	60	No
7:30:00 PM	84	60	No
7:45:00 PM	79	60	No
8:00:00 PM	80	60	No
8:15:00 PM	77	60	No
8:30:00 PM	80	60	No
8:45:00 PM	77	60	No
9:00:00 PM	78	60	No
9:15:00 PM	78	60	No
9:30:00 PM	83	60	No
9:45:00 PM	79	60	No
10:00:00 PM	77	60	No
10:15:00 PM	79	60	No
10:30:00 PM	77	60	No
10:45:00 PM	76	60	No
11:00:00 PM	76	60	No
11:15:00 PM	76	60	No
11:30:00 PM	76	60	No
11:45:00 PM	76	60	No

RD2 Elevated Receiver			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	74	61	No
12:15:00 AM	74	61	No
12:30:00 AM	73	61	No
12:45:00 AM	83	61	No
1:00:00 AM	73	61	No
1:15:00 AM	71	61	No
1:30:00 AM	79	61	No
1:45:00 AM	80	61	No
2:00:00 AM	70	61	No
2:15:00 AM	72	61	No
2:30:00 AM	71	61	No
2:45:00 AM	70	61	No
3:00:00 AM	76	61	No
3:15:00 AM	72	61	No
3:30:00 AM	68	61	No
3:45:00 AM	70	61	No
4:00:00 AM	71	61	No
4:15:00 AM	71	61	No
4:30:00 AM	75	61	No
4:45:00 AM	74	61	No
5:00:00 AM	75	61	No
5:15:00 AM	75	61	No
5:30:00 AM	76	61	No
5:45:00 AM	77	61	No
6:00:00 AM	77	61	No
6:15:00 AM	79	61	No
6:30:00 AM	83	61	No
6:45:00 AM	80	61	No
7:00:00 AM	83	61	No
7:15:00 AM	80	61	No
7:30:00 AM	81	61	No
7:45:00 AM	81	61	No
8:00:00 AM	81	61	No
8:15:00 AM	80	61	No
8:30:00 AM	80	61	No
8:45:00 AM	80	61	No
9:00:00 AM	80	61	No
9:15:00 AM	80	61	No
9:30:00 AM	80	61	No
9:45:00 AM	80	61	No
10:00:00 AM	82	61	No
10:15:00 AM	79	61	No
10:30:00 AM	79	61	No
10:45:00 AM	79	61	No
11:00:00 AM	80	61	No
11:15:00 AM	79	61	No
11:30:00 AM	78	61	No
11:45:00 AM	79	61	No
12:00:00 PM	84	61	No
12:15:00 PM	81	61	No
12:30:00 PM	80	61	No
12:45:00 PM	78	61	No
1:00:00 PM	80	61	No
1:15:00 PM	80	61	No
1:30:00 PM	79	61	No
1:45:00 PM	79	61	No

RD2 Elevated Receiver			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:00:00 PM	81	61	No
2:15:00 PM	79	61	No
2:30:00 PM	80	61	No
2:45:00 PM	80	61	No
3:00:00 PM	79	61	No
3:15:00 PM	79	61	No
3:30:00 PM	79	61	No
3:45:00 PM	79	61	No
4:00:00 PM	80	61	No
4:15:00 PM	78	61	No
4:30:00 PM	77	61	No
4:45:00 PM	79	61	No
5:00:00 PM	80	61	No
5:15:00 PM	81	61	No
5:30:00 PM	80	61	No
5:45:00 PM	79	61	No
6:00:00 PM	79	61	No
6:15:00 PM	78	61	No
6:30:00 PM	79	61	No
6:45:00 PM	79	61	No
7:00:00 PM	79	61	No
7:15:00 PM	78	61	No
7:30:00 PM	78	61	No
7:45:00 PM	78	61	No
8:00:00 PM	78	61	No
8:15:00 PM	79	61	No
8:30:00 PM	77	61	No
8:45:00 PM	79	61	No
9:00:00 PM	77	61	No
9:15:00 PM	78	61	No
9:30:00 PM	77	61	No
9:45:00 PM	77	61	No
10:00:00 PM	82	61	No
10:15:00 PM	78	61	No
10:30:00 PM	80	61	No
10:45:00 PM	75	61	No
11:00:00 PM	80	61	No
11:15:00 PM	77	61	No
11:30:00 PM	74	61	No
11:45:00 PM	74	61	No

RD3 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	75	56	No
12:15:00 AM	72	56	No
12:30:00 AM	73	56	No
12:45:00 AM	70	56	No
1:00:00 AM	72	56	No
1:15:00 AM	70	56	No
1:30:00 AM	75	56	No
1:45:00 AM	70	56	No
2:00:00 AM	73	56	No
2:15:00 AM	70	56	No
2:30:00 AM	76	56	No
2:45:00 AM	79	56	No
3:00:00 AM	77	56	No
3:15:00 AM	67	56	No
3:30:00 AM	72	56	No
3:45:00 AM	66	56	No
4:00:00 AM	66	56	No
4:15:00 AM	67	56	No
4:30:00 AM	69	56	No
4:45:00 AM	72	56	No
5:00:00 AM	74	56	No
5:15:00 AM	75	56	No
5:30:00 AM	77	56	No
5:45:00 AM	77	56	No
6:00:00 AM	78	56	No
6:15:00 AM	79	56	No
6:30:00 AM	79	56	No
6:45:00 AM	78	56	No
7:00:00 AM	79	56	No
7:15:00 AM	79	56	No
7:30:00 AM	79	56	No
7:45:00 AM	78	56	No
8:00:00 AM	78	56	No
8:15:00 AM	79	56	No
8:30:00 AM	78	56	No
8:45:00 AM	77	56	No
9:00:00 AM	80	56	No
9:15:00 AM	80	56	No
9:30:00 AM	78	56	No
9:45:00 AM	77	56	No
10:00:00 AM	78	56	No
10:15:00 AM	77	56	No
10:30:00 AM	77	56	No
10:45:00 AM	77	56	No
11:00:00 AM	78	56	No
11:15:00 AM	77	56	No
11:30:00 AM	85	56	No
11:45:00 AM	77	56	No
12:00:00 PM	78	56	No
12:15:00 PM	78	56	No
12:30:00 PM	78	56	No
12:45:00 PM	78	56	No
1:00:00 PM	78	56	No
1:15:00 PM	77	56	No
1:30:00 PM	79	56	No
1:45:00 PM	79	56	No
2:00:00 PM	78	56	No

RD3 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	78	56	No
2:30:00 PM	78	56	No
2:45:00 PM	79	56	No
3:00:00 PM	78	56	No
3:15:00 PM	78	56	No
3:30:00 PM	80	56	No
3:45:00 PM	78	56	No
4:00:00 PM	78	56	No
4:15:00 PM	79	56	No
4:30:00 PM	79	56	No
4:45:00 PM	79	56	No
5:00:00 PM	80	56	No
5:15:00 PM	80	56	No
5:30:00 PM	81	56	No
5:45:00 PM	79	56	No
6:00:00 PM	81	56	No
6:15:00 PM	79	56	No
6:30:00 PM	78	56	No
6:45:00 PM	82	56	No
7:00:00 PM	78	56	No
7:15:00 PM	80	56	No
7:30:00 PM	80	56	No
7:45:00 PM	79	56	No
8:00:00 PM	82	56	No
8:15:00 PM	80	56	No
8:30:00 PM	79	56	No
8:45:00 PM	78	56	No
9:00:00 PM	81	56	No
9:15:00 PM	76	56	No
9:30:00 PM	78	56	No
9:45:00 PM	77	56	No
10:00:00 PM	76	56	No
10:15:00 PM	78	56	No
10:30:00 PM	79	56	No
10:45:00 PM	75	56	No
11:00:00 PM	76	56	No
11:15:00 PM	75	56	No
11:30:00 PM	74	56	No
11:45:00 PM	75	56	No

RD3 Weekend			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	75	56	No
12:15:00 AM	74	56	No
12:30:00 AM	74	56	No
12:45:00 AM	72	56	No
1:00:00 AM	71	56	No
1:15:00 AM	67	56	No
1:30:00 AM	67	56	No
1:45:00 AM	67	56	No
2:00:00 AM	72	56	No
2:15:00 AM	70	56	No
2:30:00 AM	71	56	No
2:45:00 AM	75	56	No
3:00:00 AM	72	56	No
3:15:00 AM	61	56	No
3:30:00 AM	66	56	No
3:45:00 AM	64	56	No
4:00:00 AM	64	56	No
4:15:00 AM	60	56	No
4:30:00 AM	60	56	No
4:45:00 AM	63	56	No
5:00:00 AM	65	56	No
5:15:00 AM	65	56	No
5:30:00 AM	69	56	No
5:45:00 AM	69	56	No
6:00:00 AM	70	56	No
6:15:00 AM	71	56	No
6:30:00 AM	72	56	No
6:45:00 AM	71	56	No
7:00:00 AM	72	56	No
7:15:00 AM	71	56	No
7:30:00 AM	72	56	No
7:45:00 AM	70	56	No
8:00:00 AM	72	56	No
8:15:00 AM	72	56	No
8:30:00 AM	73	56	No
8:45:00 AM	73	56	No
9:00:00 AM	72	56	No
9:15:00 AM	72	56	No
9:30:00 AM	73	56	No
9:45:00 AM	73	56	No
10:00:00 AM	72	56	No
10:15:00 AM	74	56	No
10:30:00 AM	76	56	No
10:45:00 AM	73	56	No
11:00:00 AM	72	56	No
11:15:00 AM	78	56	No
11:30:00 AM	77	56	No
11:45:00 AM	78	56	No
12:00:00 PM	78	56	No
12:15:00 PM	77	56	No
12:30:00 PM	80	56	No
12:45:00 PM	78	56	No
1:00:00 PM	80	56	No
1:15:00 PM	76	56	No
1:30:00 PM	76	56	No
1:45:00 PM	76	56	No
2:00:00 PM	76	56	No

RD3 Weekend			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	77	56	No
2:30:00 PM	78	56	No
2:45:00 PM	78	56	No
3:00:00 PM	78	56	No
3:15:00 PM	79	56	No
3:30:00 PM	77	56	No
3:45:00 PM	79	56	No
4:00:00 PM	81	56	No
4:15:00 PM	78	56	No
4:30:00 PM	78	56	No
4:45:00 PM	80	56	No
5:00:00 PM	81	56	No
5:15:00 PM	81	56	No
5:30:00 PM	79	56	No
5:45:00 PM	80	56	No
6:00:00 PM	79	56	No
6:15:00 PM	78	56	No
6:30:00 PM	79	56	No
6:45:00 PM	77	56	No
7:00:00 PM	78	56	No
7:15:00 PM	80	56	No
7:30:00 PM	79	56	No
7:45:00 PM	81	56	No
8:00:00 PM	78	56	No
8:15:00 PM	77	56	No
8:30:00 PM	83	56	No
8:45:00 PM	77	56	No
9:00:00 PM	77	56	No
9:15:00 PM	77	56	No
9:30:00 PM	80	56	No
9:45:00 PM	81	56	No
10:00:00 PM	77	56	No
10:15:00 PM	78	56	No
10:30:00 PM	76	56	No
10:45:00 PM	77	56	No
11:00:00 PM	78	56	No
11:15:00 PM	76	56	No
11:30:00 PM	76	56	No
11:45:00 PM	77	56	No

RD4 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	79	66	No
12:15:00 AM	78	66	No
12:30:00 AM	75	66	No
12:45:00 AM	87	66	No
1:00:00 AM	75	66	No
1:15:00 AM	73	66	No
1:30:00 AM	85	66	No
1:45:00 AM	83	66	No
2:00:00 AM	73	66	No
2:15:00 AM	74	66	No
2:30:00 AM	74	66	No
2:45:00 AM	74	66	No
3:00:00 AM	78	66	No
3:15:00 AM	75	66	No
3:30:00 AM	72	66	No
3:45:00 AM	72	66	No
4:00:00 AM	73	66	No
4:15:00 AM	74	66	No
4:30:00 AM	76	66	No
4:45:00 AM	78	66	No
5:00:00 AM	77	66	No
5:15:00 AM	80	66	No
5:30:00 AM	80	66	No
5:45:00 AM	81	66	No
6:00:00 AM	81	66	No
6:15:00 AM	81	66	No
6:30:00 AM	82	66	No
6:45:00 AM	83	66	No
7:00:00 AM	82	66	No
7:15:00 AM	83	66	No
7:30:00 AM	84	66	No
7:45:00 AM	84	66	No
8:00:00 AM	83	66	No
8:15:00 AM	83	66	No
8:30:00 AM	83	66	No
8:45:00 AM	84	66	No
9:00:00 AM	83	66	No
9:15:00 AM	84	66	No
9:30:00 AM	83	66	No
9:45:00 AM	82	66	No
10:00:00 AM	86	66	No
10:15:00 AM	83	66	No
10:30:00 AM	82	66	No
10:45:00 AM	83	66	No
11:00:00 AM	81	66	No
11:15:00 AM	81	66	No
11:30:00 AM	82	66	No
11:45:00 AM	82	66	No
12:00:00 PM	85	66	No
12:15:00 PM	82	66	No
12:30:00 PM	81	66	No
12:45:00 PM	81	66	No
1:00:00 PM	83	66	No
1:15:00 PM	83	66	No
1:30:00 PM	82	66	No
1:45:00 PM	82	66	No
2:00:00 PM	83	66	No

RD4 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	81	66	No
2:30:00 PM	83	66	No
2:45:00 PM	84	66	No
3:00:00 PM	82	66	No
3:15:00 PM	81	66	No
3:30:00 PM	83	66	No
3:45:00 PM	82	66	No
4:00:00 PM	83	66	No
4:15:00 PM	81	66	No
4:30:00 PM	81	66	No
4:45:00 PM	81	66	No
5:00:00 PM	82	66	No
5:15:00 PM	82	66	No
5:30:00 PM	81	66	No
5:45:00 PM	82	66	No
6:00:00 PM	83	66	No
6:15:00 PM	79	66	No
6:30:00 PM	80	66	No
6:45:00 PM	79	66	No
7:00:00 PM	81	66	No
7:15:00 PM	81	66	No
7:30:00 PM	80	66	No
7:45:00 PM	80	66	No
8:00:00 PM	80	66	No
8:15:00 PM	80	66	No
8:30:00 PM	80	66	No
8:45:00 PM	79	66	No
9:00:00 PM	79	66	No
9:15:00 PM	80	66	No
9:30:00 PM	82	66	No
9:45:00 PM	78	66	No
10:00:00 PM	88	66	No
10:15:00 PM	79	66	No
10:30:00 PM	84	66	No
10:45:00 PM	78	66	No
11:00:00 PM	78	66	No
11:15:00 PM	78	66	No
11:30:00 PM	77	66	No
11:45:00 PM	77	66	No

RD4 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	76	66	No
12:15:00 AM	77	66	No
12:30:00 AM	76	66	No
12:45:00 AM	75	66	No
1:00:00 AM	74	66	No
1:15:00 AM	74	66	No
1:30:00 AM	75	66	No
1:45:00 AM	73	66	No
2:00:00 AM	73	66	No
2:15:00 AM	76	66	No
2:30:00 AM	73	66	No
2:45:00 AM	74	66	No
3:00:00 AM	75	66	No
3:15:00 AM	75	66	No
3:30:00 AM	74	66	No
3:45:00 AM	71	66	No
4:00:00 AM	70	66	No
4:15:00 AM	70	66	No
4:30:00 AM	71	66	No
4:45:00 AM	74	66	No
5:00:00 AM	69	66	No
5:15:00 AM	69	66	No
5:30:00 AM	72	66	No
5:45:00 AM	72	66	No
6:00:00 AM	71	66	No
6:15:00 AM	73	66	No
6:30:00 AM	74	66	No
6:45:00 AM	75	66	No
7:00:00 AM	76	66	No
7:15:00 AM	76	66	No
7:30:00 AM	76	66	No
7:45:00 AM	76	66	No
8:00:00 AM	77	66	No
8:15:00 AM	77	66	No
8:30:00 AM	77	66	No
8:45:00 AM	77	66	No
9:00:00 AM	78	66	No
9:15:00 AM	77	66	No
9:30:00 AM	77	66	No
9:45:00 AM	79	66	No
10:00:00 AM	78	66	No
10:15:00 AM	78	66	No
10:30:00 AM	78	66	No
10:45:00 AM	78	66	No
11:00:00 AM	78	66	No
11:15:00 AM	78	66	No
11:30:00 AM	78	66	No
11:45:00 AM	83	66	No
12:00:00 PM	78	66	No
12:15:00 PM	78	66	No
12:30:00 PM	79	66	No
12:45:00 PM	79	66	No
1:00:00 PM	79	66	No
1:15:00 PM	78	66	No
1:30:00 PM	78	66	No
1:45:00 PM	78	66	No
2:00:00 PM	78	66	No

RD4 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	79	66	No
2:30:00 PM	78	66	No
2:45:00 PM	79	66	No
3:00:00 PM	81	66	No
3:15:00 PM	78	66	No
3:30:00 PM	78	66	No
3:45:00 PM	77	66	No
4:00:00 PM	83	66	No
4:15:00 PM	77	66	No
4:30:00 PM	79	66	No
4:45:00 PM	81	66	No
5:00:00 PM	78	66	No
5:15:00 PM	77	66	No
5:30:00 PM	78	66	No
5:45:00 PM	79	66	No
6:00:00 PM	77	66	No
6:15:00 PM	78	66	No
6:30:00 PM	77	66	No
6:45:00 PM	78	66	No
7:00:00 PM	79	66	No
7:15:00 PM	80	66	No
7:30:00 PM	80	66	No
7:45:00 PM	79	66	No
8:00:00 PM	79	66	No
8:15:00 PM	79	66	No
8:30:00 PM	79	66	No
8:45:00 PM	79	66	No
9:00:00 PM	79	66	No
9:15:00 PM	79	66	No
9:30:00 PM	78	66	No
9:45:00 PM	79	66	No
10:00:00 PM	78	66	No
10:15:00 PM	78	66	No
10:30:00 PM	78	66	No
10:45:00 PM	78	66	No
11:00:00 PM	77	66	No
11:15:00 PM	78	66	No
11:30:00 PM	78	66	No
11:45:00 PM	80	66	No

RD5 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	61	55	No
12:15:00 AM	64	55	No
12:30:00 AM	60	55	No
12:45:00 AM	62	55	No
1:00:00 AM	60	55	No
1:15:00 AM	58	55	No
1:30:00 AM	58	55	No
1:45:00 AM	60	55	No
2:00:00 AM	58	55	No
2:15:00 AM	58	55	No
2:30:00 AM	59	55	No
2:45:00 AM	59	55	No
3:00:00 AM	57	55	No
3:15:00 AM	55	55	No
3:30:00 AM	55	55	No
3:45:00 AM	55	55	No
4:00:00 AM	55	55	No
4:15:00 AM	55	55	No
4:30:00 AM	56	55	No
4:45:00 AM	56	55	No
5:00:00 AM	56	55	No
5:15:00 AM	60	55	No
5:30:00 AM	59	55	No
5:45:00 AM	62	55	No
6:00:00 AM	60	55	No
6:15:00 AM	60	55	No
6:30:00 AM	63	55	No
6:45:00 AM	64	55	No
7:00:00 AM	62	55	No
7:15:00 AM	63	55	No
7:30:00 AM	63	55	No
7:45:00 AM	63	55	No
8:00:00 AM	66	55	No
8:15:00 AM	65	55	No
8:30:00 AM	69	55	No
8:45:00 AM	66	55	No
9:00:00 AM	69	55	No
9:15:00 AM	73	55	No
9:30:00 AM	67	55	No
9:45:00 AM	66	55	No
10:00:00 AM	68	55	No
10:15:00 AM	68	55	No
10:30:00 AM	66	55	No
10:45:00 AM	68	55	No
11:00:00 AM	66	55	No
11:15:00 AM	70	55	No
11:30:00 AM	68	55	No
11:45:00 AM	66	55	No
12:00:00 PM	66	55	No
12:15:00 PM	66	55	No
12:30:00 PM	68	55	No
12:45:00 PM	66	55	No
1:00:00 PM	66	55	No
1:15:00 PM	68	55	No
1:30:00 PM	68	55	No
1:45:00 PM	73	55	No
2:00:00 PM	67	55	No

RDS Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	67	55	No
2:30:00 PM	66	55	No
2:45:00 PM	67	55	No
3:00:00 PM	67	55	No
3:15:00 PM	66	55	No
3:30:00 PM	68	55	No
3:45:00 PM	68	55	No
4:00:00 PM	73	55	No
4:15:00 PM	72	55	No
4:30:00 PM	74	55	No
4:45:00 PM	74	55	No
5:00:00 PM	77	55	No
5:15:00 PM	70	55	No
5:30:00 PM	71	55	No
5:45:00 PM	67	55	No
6:00:00 PM	68	55	No
6:15:00 PM	68	55	No
6:30:00 PM	82	55	No
6:45:00 PM	72	55	No
7:00:00 PM	65	55	No
7:15:00 PM	65	55	No
7:30:00 PM	67	55	No
7:45:00 PM	65	55	No
8:00:00 PM	72	55	No
8:15:00 PM	67	55	No
8:30:00 PM	67	55	No
8:45:00 PM	66	55	No
9:00:00 PM	64	55	No
9:15:00 PM	64	55	No
9:30:00 PM	63	55	No
9:45:00 PM	64	55	No
10:00:00 PM	63	55	No
10:15:00 PM	64	55	No
10:30:00 PM	65	55	No
10:45:00 PM	62	55	No
11:00:00 PM	62	55	No
11:15:00 PM	62	55	No
11:30:00 PM	62	55	No
11:45:00 PM	63	55	No

RD5 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	62	55	No
12:15:00 AM	68	55	No
12:30:00 AM	63	55	No
12:45:00 AM	60	55	No
1:00:00 AM	60	55	No
1:15:00 AM	60	55	No
1:30:00 AM	60	55	No
1:45:00 AM	59	55	No
2:00:00 AM	59	55	No
2:15:00 AM	62	55	No
2:30:00 AM	59	55	No
2:45:00 AM	63	55	No
3:00:00 AM	60	55	No
3:15:00 AM	62	55	No
3:30:00 AM	59	55	No
3:45:00 AM	59	55	No
4:00:00 AM	58	55	No
4:15:00 AM	56	55	No
4:30:00 AM	57	55	No
4:45:00 AM	58	55	No
5:00:00 AM	57	55	No
5:15:00 AM	54	52* (see footnote)	No
5:30:00 AM	56	55	No
5:45:00 AM	57	55	No
6:00:00 AM	55	55	No
6:15:00 AM	57	55	No
6:30:00 AM	59	55	No
6:45:00 AM	61	55	No
7:00:00 AM	61	55	No
7:15:00 AM	61	55	No
7:30:00 AM	61	55	No
7:45:00 AM	62	55	No
8:00:00 AM	63	55	No
8:15:00 AM	64	55	No
8:30:00 AM	63	55	No
8:45:00 AM	62	55	No
9:00:00 AM	62	55	No
9:15:00 AM	62	55	No
9:30:00 AM	62	55	No
9:45:00 AM	64	55	No
10:00:00 AM	65	55	No
10:15:00 AM	64	55	No
10:30:00 AM	64	55	No
10:45:00 AM	64	55	No
11:00:00 AM	64	55	No
11:15:00 AM	64	55	No
11:30:00 AM	64	55	No
11:45:00 AM	69	55	No
12:00:00 PM	63	55	No
12:15:00 PM	66	55	No
12:30:00 PM	65	55	No
12:45:00 PM	66	55	No
1:00:00 PM	64	55	No
1:15:00 PM	64	55	No
1:30:00 PM	65	55	No
1:45:00 PM	64	55	No
2:00:00 PM	65	55	No

* Predicted Noise per proposed modified equipment operation shown on page 9 of the report.

RDS Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	64	55	No
2:30:00 PM	64	55	No
2:45:00 PM	65	55	No
3:00:00 PM	72	55	No
3:15:00 PM	64	55	No
3:30:00 PM	66	55	No
3:45:00 PM	64	55	No
4:00:00 PM	72	55	No
4:15:00 PM	64	55	No
4:30:00 PM	68	55	No
4:45:00 PM	70	55	No
5:00:00 PM	65	55	No
5:15:00 PM	65	55	No
5:30:00 PM	65	55	No
5:45:00 PM	65	55	No
6:00:00 PM	64	55	No
6:15:00 PM	64	55	No
6:30:00 PM	65	55	No
6:45:00 PM	65	55	No
7:00:00 PM	67	55	No
7:15:00 PM	65	55	No
7:30:00 PM	67	55	No
7:45:00 PM	65	55	No
8:00:00 PM	66	55	No
8:15:00 PM	65	55	No
8:30:00 PM	66	55	No
8:45:00 PM	64	55	No
9:00:00 PM	65	55	No
9:15:00 PM	65	55	No
9:30:00 PM	65	55	No
9:45:00 PM	64	55	No
10:00:00 PM	64	55	No
10:15:00 PM	65	55	No
10:30:00 PM	64	55	No
10:45:00 PM	63	55	No
11:00:00 PM	62	55	No
11:15:00 PM	63	55	No
11:30:00 PM	62	55	No
11:45:00 PM	64	55	No

RD6 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	71	54	No
12:15:00 AM	72	54	No
12:30:00 AM	69	54	No
12:45:00 AM	71	54	No
1:00:00 AM	69	54	No
1:15:00 AM	66	54	No
1:30:00 AM	66	54	No
1:45:00 AM	66	54	No
2:00:00 AM	72	54	No
2:15:00 AM	69	54	No
2:30:00 AM	71	54	No
2:45:00 AM	62	54	No
3:00:00 AM	71	54	No
3:15:00 AM	64	54	No
3:30:00 AM	62	54	No
3:45:00 AM	70	54	No
4:00:00 AM	64	54	No
4:15:00 AM	68	54	No
4:30:00 AM	67	54	No
4:45:00 AM	68	54	No
5:00:00 AM	71	54	No
5:15:00 AM	72	54	No
5:30:00 AM	73	54	No
5:45:00 AM	71	54	No
6:00:00 AM	74	54	No
6:15:00 AM	76	54	No
6:30:00 AM	78	54	No
6:45:00 AM	75	54	No
7:00:00 AM	76	54	No
7:15:00 AM	81	54	No
7:30:00 AM	76	54	No
7:45:00 AM	76	54	No
8:00:00 AM	77	54	No
8:15:00 AM	75	54	No
8:30:00 AM	75	54	No
8:45:00 AM	80	54	No
9:00:00 AM	76	54	No
9:15:00 AM	79	54	No
9:30:00 AM	76	54	No
9:45:00 AM	75	54	No
10:00:00 AM	77	54	No
10:15:00 AM	75	54	No
10:30:00 AM	75	54	No
10:45:00 AM	75	54	No
11:00:00 AM	77	54	No
11:15:00 AM	76	54	No
11:30:00 AM	75	54	No
11:45:00 AM	76	54	No
12:00:00 PM	76	54	No
12:15:00 PM	76	54	No
12:30:00 PM	76	54	No
12:45:00 PM	77	54	No
1:00:00 PM	76	54	No
1:15:00 PM	76	54	No
1:30:00 PM	74	54	No
1:45:00 PM	77	54	No
2:00:00 PM	74	54	No

RD6 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	75	54	No
2:30:00 PM	74	54	No
2:45:00 PM	75	54	No
3:00:00 PM	78	54	No
3:15:00 PM	75	54	No
3:30:00 PM	75	54	No
3:45:00 PM	75	54	No
4:00:00 PM	77	54	No
4:15:00 PM	76	54	No
4:30:00 PM	74	54	No
4:45:00 PM	76	54	No
5:00:00 PM	74	54	No
5:15:00 PM	76	54	No
5:30:00 PM	76	54	No
5:45:00 PM	77	54	No
6:00:00 PM	78	54	No
6:15:00 PM	76	54	No
6:30:00 PM	83	54	No
6:45:00 PM	78	54	No
7:00:00 PM	75	54	No
7:15:00 PM	75	54	No
7:30:00 PM	76	54	No
7:45:00 PM	77	54	No
8:00:00 PM	85	54	No
8:15:00 PM	75	54	No
8:30:00 PM	76	54	No
8:45:00 PM	76	54	No
9:00:00 PM	75	54	No
9:15:00 PM	76	54	No
9:30:00 PM	75	54	No
9:45:00 PM	80	54	No
10:00:00 PM	74	54	No
10:15:00 PM	75	54	No
10:30:00 PM	76	54	No
10:45:00 PM	74	54	No
11:00:00 PM	71	54	No
11:15:00 PM	73	54	No
11:30:00 PM	70	54	No
11:45:00 PM	76	54	No

RD6 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	70	54	No
12:15:00 AM	73	54	No
12:30:00 AM	74	54	No
12:45:00 AM	71	54	No
1:00:00 AM	68	54	No
1:15:00 AM	69	54	No
1:30:00 AM	77	54	No
1:45:00 AM	67	54	No
2:00:00 AM	74	54	No
2:15:00 AM	80	54	No
2:30:00 AM	72	54	No
2:45:00 AM	73	54	No
3:00:00 AM	78	54	No
3:15:00 AM	78	54	No
3:30:00 AM	73	54	No
3:45:00 AM	69	54	No
4:00:00 AM	75	54	No
4:15:00 AM	72	54	No
4:30:00 AM	72	54	No
4:45:00 AM	72	54	No
5:00:00 AM	62	54	No
5:15:00 AM	64	54	No
5:30:00 AM	66	54	No
5:45:00 AM	68	54	No
6:00:00 AM	64	54	No
6:15:00 AM	74	54	No
6:30:00 AM	68	54	No
6:45:00 AM	69	54	No
7:00:00 AM	69	54	No
7:15:00 AM	69	54	No
7:30:00 AM	71	54	No
7:45:00 AM	69	54	No
8:00:00 AM	73	54	No
8:15:00 AM	70	54	No
8:30:00 AM	73	54	No
8:45:00 AM	71	54	No
9:00:00 AM	71	54	No
9:15:00 AM	71	54	No
9:30:00 AM	72	54	No
9:45:00 AM	73	54	No
10:00:00 AM	73	54	No
10:15:00 AM	75	54	No
10:30:00 AM	74	54	No
10:45:00 AM	75	54	No
11:00:00 AM	71	54	No
11:15:00 AM	71	54	No
11:30:00 AM	72	54	No
11:45:00 AM	74	54	No
12:00:00 PM	74	54	No
12:15:00 PM	72	54	No
12:30:00 PM	73	54	No
12:45:00 PM	75	54	No
1:00:00 PM	74	54	No
1:15:00 PM	74	54	No
1:30:00 PM	74	54	No
1:45:00 PM	75	54	No
2:00:00 PM	75	54	No

RD6 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	74	54	No
2:30:00 PM	73	54	No
2:45:00 PM	72	54	No
3:00:00 PM	75	54	No
3:15:00 PM	74	54	No
3:30:00 PM	73	54	No
3:45:00 PM	72	54	No
4:00:00 PM	75	54	No
4:15:00 PM	76	54	No
4:30:00 PM	73	54	No
4:45:00 PM	74	54	No
5:00:00 PM	73	54	No
5:15:00 PM	74	54	No
5:30:00 PM	74	54	No
5:45:00 PM	73	54	No
6:00:00 PM	72	54	No
6:15:00 PM	73	54	No
6:30:00 PM	72	54	No
6:45:00 PM	75	54	No
7:00:00 PM	74	54	No
7:15:00 PM	74	54	No
7:30:00 PM	75	54	No
7:45:00 PM	74	54	No
8:00:00 PM	74	54	No
8:15:00 PM	75	54	No
8:30:00 PM	75	54	No
8:45:00 PM	76	54	No
9:00:00 PM	76	54	No
9:15:00 PM	76	54	No
9:30:00 PM	75	54	No
9:45:00 PM	75	54	No
10:00:00 PM	77	54	No
10:15:00 PM	76	54	No
10:30:00 PM	73	54	No
10:45:00 PM	75	54	No
11:00:00 PM	73	54	No
11:15:00 PM	75	54	No
11:30:00 PM	72	54	No
11:45:00 PM	73	54	No

RD7 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	76	57	No
12:15:00 AM	80	57	No
12:30:00 AM	75	57	No
12:45:00 AM	75	57	No
1:00:00 AM	76	57	No
1:15:00 AM	73	57	No
1:30:00 AM	71	57	No
1:45:00 AM	79	57	No
2:00:00 AM	73	57	No
2:15:00 AM	73	57	No
2:30:00 AM	72	57	No
2:45:00 AM	69	57	No
3:00:00 AM	73	57	No
3:15:00 AM	69	57	No
3:30:00 AM	68	57	No
3:45:00 AM	73	57	No
4:00:00 AM	70	57	No
4:15:00 AM	72	57	No
4:30:00 AM	73	57	No
4:45:00 AM	74	57	No
5:00:00 AM	75	57	No
5:15:00 AM	75	57	No
5:30:00 AM	77	57	No
5:45:00 AM	77	57	No
6:00:00 AM	79	57	No
6:15:00 AM	79	57	No
6:30:00 AM	82	57	No
6:45:00 AM	83	57	No
7:00:00 AM	81	57	No
7:15:00 AM	83	57	No
7:30:00 AM	82	57	No
7:45:00 AM	82	57	No
8:00:00 AM	83	57	No
8:15:00 AM	83	57	No
8:30:00 AM	81	57	No
8:45:00 AM	81	57	No
9:00:00 AM	82	57	No
9:15:00 AM	92	57	No
9:30:00 AM	81	57	No
9:45:00 AM	81	57	No
10:00:00 AM	82	57	No
10:15:00 AM	82	57	No
10:30:00 AM	81	57	No
10:45:00 AM	81	57	No
11:00:00 AM	81	57	No
11:15:00 AM	81	57	No
11:30:00 AM	80	57	No
11:45:00 AM	81	57	No
12:00:00 PM	80	57	No
12:15:00 PM	82	57	No
12:30:00 PM	85	57	No
12:45:00 PM	80	57	No
1:00:00 PM	80	57	No
1:15:00 PM	81	57	No
1:30:00 PM	82	57	No
1:45:00 PM	89	57	No
2:00:00 PM	80	57	No

RD7 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	80	57	No
2:30:00 PM	80	57	No
2:45:00 PM	81	57	No
3:00:00 PM	82	57	No
3:15:00 PM	81	57	No
3:30:00 PM	81	57	No
3:45:00 PM	81	57	No
4:00:00 PM	81	57	No
4:15:00 PM	81	57	No
4:30:00 PM	81	57	No
4:45:00 PM	82	57	No
5:00:00 PM	80	57	No
5:15:00 PM	85	57	No
5:30:00 PM	85	57	No
5:45:00 PM	86	57	No
6:00:00 PM	84	57	No
6:15:00 PM	81	57	No
6:30:00 PM	90	57	No
6:45:00 PM	88	57	No
7:00:00 PM	80	57	No
7:15:00 PM	81	57	No
7:30:00 PM	82	57	No
7:45:00 PM	81	57	No
8:00:00 PM	89	57	No
8:15:00 PM	80	57	No
8:30:00 PM	80	57	No
8:45:00 PM	80	57	No
9:00:00 PM	80	57	No
9:15:00 PM	80	57	No
9:30:00 PM	80	57	No
9:45:00 PM	81	57	No
10:00:00 PM	78	57	No
10:15:00 PM	79	57	No
10:30:00 PM	81	57	No
10:45:00 PM	77	57	No
11:00:00 PM	78	57	No
11:15:00 PM	79	57	No
11:30:00 PM	76	57	No
11:45:00 PM	78	57	No

RD7 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	76	57	No
12:15:00 AM	82	57	No
12:30:00 AM	77	57	No
12:45:00 AM	75	57	No
1:00:00 AM	75	57	No
1:15:00 AM	75	57	No
1:30:00 AM	74	57	No
1:45:00 AM	73	57	No
2:00:00 AM	73	57	No
2:15:00 AM	80	57	No
2:30:00 AM	72	57	No
2:45:00 AM	73	57	No
3:00:00 AM	75	57	No
3:15:00 AM	77	57	No
3:30:00 AM	75	57	No
3:45:00 AM	71	57	No
4:00:00 AM	72	57	No
4:15:00 AM	69	57	No
4:30:00 AM	71	57	No
4:45:00 AM	72	57	No
5:00:00 AM	69	57	No
5:15:00 AM	68	57	No
5:30:00 AM	71	57	No
5:45:00 AM	71	57	No
6:00:00 AM	70	57	No
6:15:00 AM	73	57	No
6:30:00 AM	74	57	No
6:45:00 AM	74	57	No
7:00:00 AM	75	57	No
7:15:00 AM	75	57	No
7:30:00 AM	76	57	No
7:45:00 AM	76	57	No
8:00:00 AM	77	57	No
8:15:00 AM	77	57	No
8:30:00 AM	77	57	No
8:45:00 AM	77	57	No
9:00:00 AM	78	57	No
9:15:00 AM	77	57	No
9:30:00 AM	77	57	No
9:45:00 AM	79	57	No
10:00:00 AM	77	57	No
10:15:00 AM	78	57	No
10:30:00 AM	78	57	No
10:45:00 AM	78	57	No
11:00:00 AM	78	57	No
11:15:00 AM	78	57	No
11:30:00 AM	78	57	No
11:45:00 AM	85	57	No
12:00:00 PM	78	57	No
12:15:00 PM	78	57	No
12:30:00 PM	80	57	No
12:45:00 PM	79	57	No
1:00:00 PM	79	57	No
1:15:00 PM	79	57	No
1:30:00 PM	79	57	No
1:45:00 PM	79	57	No
2:00:00 PM	79	57	No

RD7 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	78	57	No
2:30:00 PM	79	57	No
2:45:00 PM	78	57	No
3:00:00 PM	88	57	No
3:15:00 PM	78	57	No
3:30:00 PM	78	57	No
3:45:00 PM	78	57	No
4:00:00 PM	82	57	No
4:15:00 PM	78	57	No
4:30:00 PM	79	57	No
4:45:00 PM	82	57	No
5:00:00 PM	79	57	No
5:15:00 PM	78	57	No
5:30:00 PM	78	57	No
5:45:00 PM	79	57	No
6:00:00 PM	78	57	No
6:15:00 PM	78	57	No
6:30:00 PM	78	57	No
6:45:00 PM	77	57	No
7:00:00 PM	80	57	No
7:15:00 PM	80	57	No
7:30:00 PM	79	57	No
7:45:00 PM	80	57	No
8:00:00 PM	80	57	No
8:15:00 PM	80	57	No
8:30:00 PM	82	57	No
8:45:00 PM	79	57	No
9:00:00 PM	80	57	No
9:15:00 PM	79	57	No
9:30:00 PM	78	57	No
9:45:00 PM	80	57	No
10:00:00 PM	78	57	No
10:15:00 PM	79	57	No
10:30:00 PM	79	57	No
10:45:00 PM	79	57	No
11:00:00 PM	77	57	No
11:15:00 PM	77	57	No
11:30:00 PM	77	57	No
11:45:00 PM	82	57	No

RD8 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	66	55	No
12:15:00 AM	70	55	No
12:30:00 AM	65	55	No
12:45:00 AM	65	55	No
1:00:00 AM	65	55	No
1:15:00 AM	62	55	No
1:30:00 AM	62	55	No
1:45:00 AM	64	55	No
2:00:00 AM	61	55	No
2:15:00 AM	62	55	No
2:30:00 AM	62	55	No
2:45:00 AM	61	55	No
3:00:00 AM	61	55	No
3:15:00 AM	60	55	No
3:30:00 AM	59	55	No
3:45:00 AM	62	55	No
4:00:00 AM	61	55	No
4:15:00 AM	62	55	No
4:30:00 AM	65	55	No
4:45:00 AM	64	55	No
5:00:00 AM	66	55	No
5:15:00 AM	66	55	No
5:30:00 AM	67	55	No
5:45:00 AM	67	55	No
6:00:00 AM	68	55	No
6:15:00 AM	69	55	No
6:30:00 AM	72	55	No
6:45:00 AM	73	55	No
7:00:00 AM	70	55	No
7:15:00 AM	80	55	No
7:30:00 AM	71	55	No
7:45:00 AM	72	55	No
8:00:00 AM	73	55	No
8:15:00 AM	73	55	No
8:30:00 AM	72	55	No
8:45:00 AM	72	55	No
9:00:00 AM	73	55	No
9:15:00 AM	79	55	No
9:30:00 AM	73	55	No
9:45:00 AM	71	55	No
10:00:00 AM	73	55	No
10:15:00 AM	74	55	No
10:30:00 AM	72	55	No
10:45:00 AM	71	55	No
11:00:00 AM	72	55	No
11:15:00 AM	73	55	No
11:30:00 AM	75	55	No
11:45:00 AM	72	55	No
12:00:00 PM	72	55	No
12:15:00 PM	73	55	No
12:30:00 PM	73	55	No
12:45:00 PM	73	55	No
1:00:00 PM	72	55	No
1:15:00 PM	72	55	No
1:30:00 PM	75	55	No
1:45:00 PM	78	55	No
2:00:00 PM	71	55	No

RD8 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	71	55	No
2:30:00 PM	71	55	No
2:45:00 PM	71	55	No
3:00:00 PM	72	55	No
3:15:00 PM	73	55	No
3:30:00 PM	72	55	No
3:45:00 PM	71	55	No
4:00:00 PM	72	55	No
4:15:00 PM	71	55	No
4:30:00 PM	71	55	No
4:45:00 PM	72	55	No
5:00:00 PM	73	55	No
5:15:00 PM	74	55	No
5:30:00 PM	77	55	No
5:45:00 PM	74	55	No
6:00:00 PM	74	55	No
6:15:00 PM	71	55	No
6:30:00 PM	88	55	No
6:45:00 PM	78	55	No
7:00:00 PM	71	55	No
7:15:00 PM	71	55	No
7:30:00 PM	73	55	No
7:45:00 PM	71	55	No
8:00:00 PM	78	55	No
8:15:00 PM	70	55	No
8:30:00 PM	69	55	No
8:45:00 PM	70	55	No
9:00:00 PM	69	55	No
9:15:00 PM	69	55	No
9:30:00 PM	69	55	No
9:45:00 PM	70	55	No
10:00:00 PM	68	55	No
10:15:00 PM	68	55	No
10:30:00 PM	70	55	No
10:45:00 PM	67	55	No
11:00:00 PM	67	55	No
11:15:00 PM	69	55	No
11:30:00 PM	67	55	No
11:45:00 PM	69	55	No

RD8 Elevated Receiver			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	66	59	No
12:15:00 AM	70	59	No
12:30:00 AM	66	59	No
12:45:00 AM	65	59	No
1:00:00 AM	65	59	No
1:15:00 AM	62	59	No
1:30:00 AM	62	59	No
1:45:00 AM	64	59	No
2:00:00 AM	62	59	No
2:15:00 AM	62	59	No
2:30:00 AM	62	59	No
2:45:00 AM	61	59	No
3:00:00 AM	61	59	No
3:15:00 AM	60	59	No
3:30:00 AM	59	59	No
3:45:00 AM	62	59	No
4:00:00 AM	62	59	No
4:15:00 AM	62	59	No
4:30:00 AM	65	59	No
4:45:00 AM	64	59	No
5:00:00 AM	66	59	No
5:15:00 AM	66	59	No
5:30:00 AM	67	59	No
5:45:00 AM	67	59	No
6:00:00 AM	68	59	No
6:15:00 AM	69	59	No
6:30:00 AM	72	59	No
6:45:00 AM	73	59	No
7:00:00 AM	71	59	No
7:15:00 AM	80	59	No
7:30:00 AM	71	59	No
7:45:00 AM	72	59	No
8:00:00 AM	73	59	No
8:15:00 AM	73	59	No
8:30:00 AM	72	59	No
8:45:00 AM	72	59	No
9:00:00 AM	73	59	No
9:15:00 AM	79	59	No
9:30:00 AM	73	59	No
9:45:00 AM	72	59	No
10:00:00 AM	73	59	No
10:15:00 AM	75	59	No
10:30:00 AM	72	59	No
10:45:00 AM	72	59	No
11:00:00 AM	73	59	No
11:15:00 AM	73	59	No
11:30:00 AM	75	59	No
11:45:00 AM	72	59	No
12:00:00 PM	72	59	No
12:15:00 PM	73	59	No
12:30:00 PM	73	59	No
12:45:00 PM	73	59	No
1:00:00 PM	72	59	No
1:15:00 PM	72	59	No
1:30:00 PM	75	59	No
1:45:00 PM	78	59	No
2:00:00 PM	71	59	No

RD8 Elevated Receiver			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	72	59	No
2:30:00 PM	71	59	No
2:45:00 PM	71	59	No
3:00:00 PM	72	59	No
3:15:00 PM	74	59	No
3:30:00 PM	72	59	No
3:45:00 PM	72	59	No
4:00:00 PM	72	59	No
4:15:00 PM	71	59	No
4:30:00 PM	72	59	No
4:45:00 PM	72	59	No
5:00:00 PM	73	59	No
5:15:00 PM	74	59	No
5:30:00 PM	77	59	No
5:45:00 PM	74	59	No
6:00:00 PM	74	59	No
6:15:00 PM	71	59	No
6:30:00 PM	88	59	No
6:45:00 PM	78	59	No
7:00:00 PM	71	59	No
7:15:00 PM	72	59	No
7:30:00 PM	73	59	No
7:45:00 PM	71	59	No
8:00:00 PM	78	59	No
8:15:00 PM	70	59	No
8:30:00 PM	70	59	No
8:45:00 PM	71	59	No
9:00:00 PM	70	59	No
9:15:00 PM	69	59	No
9:30:00 PM	69	59	No
9:45:00 PM	70	59	No
10:00:00 PM	68	59	No
10:15:00 PM	69	59	No
10:30:00 PM	70	59	No
10:45:00 PM	67	59	No
11:00:00 PM	67	59	No
11:15:00 PM	69	59	No
11:30:00 PM	67	59	No
11:45:00 PM	70	59	No

RD8 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	66	55	No
12:15:00 AM	72	55	No
12:30:00 AM	67	55	No
12:45:00 AM	65	55	No
1:00:00 AM	64	55	No
1:15:00 AM	64	55	No
1:30:00 AM	65	55	No
1:45:00 AM	63	55	No
2:00:00 AM	63	55	No
2:15:00 AM	67	55	No
2:30:00 AM	63	55	No
2:45:00 AM	67	55	No
3:00:00 AM	65	55	No
3:15:00 AM	66	55	No
3:30:00 AM	64	55	No
3:45:00 AM	63	55	No
4:00:00 AM	62	55	No
4:15:00 AM	61	55	No
4:30:00 AM	61	55	No
4:45:00 AM	63	55	No
5:00:00 AM	61	55	No
5:15:00 AM	58	55	No
5:30:00 AM	61	55	No
5:45:00 AM	61	55	No
6:00:00 AM	60	55	No
6:15:00 AM	62	55	No
6:30:00 AM	64	55	No
6:45:00 AM	66	55	No
7:00:00 AM	65	55	No
7:15:00 AM	65	55	No
7:30:00 AM	65	55	No
7:45:00 AM	66	55	No
8:00:00 AM	68	55	No
8:15:00 AM	68	55	No
8:30:00 AM	68	55	No
8:45:00 AM	67	55	No
9:00:00 AM	67	55	No
9:15:00 AM	66	55	No
9:30:00 AM	67	55	No
9:45:00 AM	68	55	No
10:00:00 AM	69	55	No
10:15:00 AM	68	55	No
10:30:00 AM	69	55	No
10:45:00 AM	68	55	No
11:00:00 AM	68	55	No
11:15:00 AM	68	55	No
11:30:00 AM	68	55	No
11:45:00 AM	73	55	No
12:00:00 PM	68	55	No
12:15:00 PM	70	55	No
12:30:00 PM	69	55	No
12:45:00 PM	70	55	No
1:00:00 PM	69	55	No
1:15:00 PM	69	55	No
1:30:00 PM	69	55	No
1:45:00 PM	68	55	No
2:00:00 PM	70	55	No

RD8 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	69	55	No
2:30:00 PM	68	55	No
2:45:00 PM	69	55	No
3:00:00 PM	76	55	No
3:15:00 PM	69	55	No
3:30:00 PM	68	55	No
3:45:00 PM	68	55	No
4:00:00 PM	76	55	No
4:15:00 PM	68	55	No
4:30:00 PM	69	55	No
4:45:00 PM	75	55	No
5:00:00 PM	69	55	No
5:15:00 PM	68	55	No
5:30:00 PM	69	55	No
5:45:00 PM	69	55	No
6:00:00 PM	68	55	No
6:15:00 PM	69	55	No
6:30:00 PM	69	55	No
6:45:00 PM	68	55	No
7:00:00 PM	71	55	No
7:15:00 PM	70	55	No
7:30:00 PM	70	55	No
7:45:00 PM	70	55	No
8:00:00 PM	73	55	No
8:15:00 PM	70	55	No
8:30:00 PM	71	55	No
8:45:00 PM	69	55	No
9:00:00 PM	69	55	No
9:15:00 PM	69	55	No
9:30:00 PM	68	55	No
9:45:00 PM	69	55	No
10:00:00 PM	68	55	No
10:15:00 PM	69	55	No
10:30:00 PM	68	55	No
10:45:00 PM	68	55	No
11:00:00 PM	67	55	No
11:15:00 PM	67	55	No
11:30:00 PM	67	55	No
11:45:00 PM	68	55	No

RD8 Weekends Elevated Receivers			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	67	59	No
12:15:00 AM	73	59	No
12:30:00 AM	67	59	No
12:45:00 AM	65	59	No
1:00:00 AM	65	59	No
1:15:00 AM	65	59	No
1:30:00 AM	65	59	No
1:45:00 AM	63	59	No
2:00:00 AM	64	59	No
2:15:00 AM	67	59	No
2:30:00 AM	64	59	No
2:45:00 AM	68	59	No
3:00:00 AM	65	59	No
3:15:00 AM	66	59	No
3:30:00 AM	64	59	No
3:45:00 AM	63	59	No
4:00:00 AM	62	59	No
4:15:00 AM	61	59	No
4:30:00 AM	62	59	No
4:45:00 AM	63	59	No
5:00:00 AM	61	59	No
5:15:00 AM	59	59	No
5:30:00 AM	61	59	No
5:45:00 AM	62	59	No
6:00:00 AM	60	59	No
6:15:00 AM	62	59	No
6:30:00 AM	64	59	No
6:45:00 AM	66	59	No
7:00:00 AM	66	59	No
7:15:00 AM	65	59	No
7:30:00 AM	66	59	No
7:45:00 AM	66	59	No
8:00:00 AM	68	59	No
8:15:00 AM	68	59	No
8:30:00 AM	68	59	No
8:45:00 AM	67	59	No
9:00:00 AM	67	59	No
9:15:00 AM	67	59	No
9:30:00 AM	67	59	No
9:45:00 AM	69	59	No
10:00:00 AM	69	59	No
10:15:00 AM	69	59	No
10:30:00 AM	69	59	No
10:45:00 AM	69	59	No
11:00:00 AM	68	59	No
11:15:00 AM	68	59	No
11:30:00 AM	68	59	No
11:45:00 AM	73	59	No
12:00:00 PM	68	59	No
12:15:00 PM	70	59	No
12:30:00 PM	70	59	No
12:45:00 PM	70	59	No
1:00:00 PM	69	59	No
1:15:00 PM	69	59	No
1:30:00 PM	70	59	No
1:45:00 PM	68	59	No
2:00:00 PM	70	59	No

RD8 Weekends Elevated Receivers			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	68.8	59	No
2:30:00 PM	68.6	59	No
2:45:00 PM	69.2	59	No
3:00:00 PM	76.4	59	No
3:15:00 PM	68.9	59	No
3:30:00 PM	68	59	No
3:45:00 PM	68.3	59	No
4:00:00 PM	76.4	59	No
4:15:00 PM	68.3	59	No
4:30:00 PM	69.1	59	No
4:45:00 PM	75	59	No
5:00:00 PM	69.3	59	No
5:15:00 PM	68.1	59	No
5:30:00 PM	69.1	59	No
5:45:00 PM	69.1	59	No
6:00:00 PM	68.4	59	No
6:15:00 PM	68.8	59	No
6:30:00 PM	69	59	No
6:45:00 PM	68.2	59	No
7:00:00 PM	71	59	No
7:15:00 PM	70	59	No
7:30:00 PM	70.4	59	No
7:45:00 PM	70.1	59	No
8:00:00 PM	73	59	No
8:15:00 PM	69.8	59	No
8:30:00 PM	71.4	59	No
8:45:00 PM	69.2	59	No
9:00:00 PM	69.6	59	No
9:15:00 PM	69.6	59	No
9:30:00 PM	68.6	59	No
9:45:00 PM	69.2	59	No
10:00:00 PM	68.4	59	No
10:15:00 PM	69.5	59	No
10:30:00 PM	68.6	59	No
10:45:00 PM	68.6	59	No
11:00:00 PM	67.1	59	No
11:15:00 PM	67.5	59	No
11:30:00 PM	67.1	59	No
11:45:00 PM	68.6	59	No

RD10 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	69	53	No
12:15:00 AM	68	53	No
12:30:00 AM	65	53	No
12:45:00 AM	65	53	No
1:00:00 AM	64	53	No
1:15:00 AM	67	53	No
1:30:00 AM	59	53	No
1:45:00 AM	63	53	No
2:00:00 AM	61	53	No
2:15:00 AM	60	53	No
2:30:00 AM	60	53	No
2:45:00 AM	58	53	No
3:00:00 AM	60	53	No
3:15:00 AM	57	53	No
3:30:00 AM	59	53	No
3:45:00 AM	61	53	No
4:00:00 AM	60	53	No
4:15:00 AM	61	53	No
4:30:00 AM	62	53	No
4:45:00 AM	63	53	No
5:00:00 AM	63	53	No
5:15:00 AM	63	53	No
5:30:00 AM	64	53	No
5:45:00 AM	66	53	No
6:00:00 AM	66	53	No
6:15:00 AM	67	53	No
6:30:00 AM	69	53	No
6:45:00 AM	71	53	No
7:00:00 AM	70	53	No
7:15:00 AM	72	53	No
7:30:00 AM	73	53	No
7:45:00 AM	71	53	No
8:00:00 AM	72	53	No
8:15:00 AM	73	53	No
8:30:00 AM	71	53	No
8:45:00 AM	71	53	No
9:00:00 AM	71	53	No
9:15:00 AM	78	53	No
9:30:00 AM	72	53	No
9:45:00 AM	73	53	No
10:00:00 AM	73	53	No
10:15:00 AM	73	53	No
10:30:00 AM	74	53	No
10:45:00 AM	74	53	No
11:00:00 AM	74	53	No
11:15:00 AM	73	53	No
11:30:00 AM	75	53	No
11:45:00 AM	72	53	No
12:00:00 PM	72	53	No
12:15:00 PM	72	53	No
12:30:00 PM	85	53	No
12:45:00 PM	73	53	No
1:00:00 PM	73	53	No
1:15:00 PM	72	53	No
1:30:00 PM	72	53	No
1:45:00 PM	75	53	No
2:00:00 PM	72	53	No

RD10 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	74	53	No
2:30:00 PM	74	53	No
2:45:00 PM	74	53	No
3:00:00 PM	73	53	No
3:15:00 PM	71	53	No
3:30:00 PM	74	53	No
3:45:00 PM	72	53	No
4:00:00 PM	72	53	No
4:15:00 PM	72	53	No
4:30:00 PM	74	53	No
4:45:00 PM	72	53	No
5:00:00 PM	72	53	No
5:15:00 PM	74	53	No
5:30:00 PM	75	53	No
5:45:00 PM	74	53	No
6:00:00 PM	75	53	No
6:15:00 PM	71	53	No
6:30:00 PM	86	53	No
6:45:00 PM	76	53	No
7:00:00 PM	73	53	No
7:15:00 PM	72	53	No
7:30:00 PM	71	53	No
7:45:00 PM	71	53	No
8:00:00 PM	74	53	No
8:15:00 PM	69	53	No
8:30:00 PM	69	53	No
8:45:00 PM	68	53	No
9:00:00 PM	70	53	No
9:15:00 PM	69	53	No
9:30:00 PM	70	53	No
9:45:00 PM	69	53	No
10:00:00 PM	68	53	No
10:15:00 PM	68	53	No
10:30:00 PM	70	53	No
10:45:00 PM	69	53	No
11:00:00 PM	67	53	No
11:15:00 PM	69	53	No
11:30:00 PM	66	53	No
11:45:00 PM	65	53	No

RD10 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	65	53	No
12:15:00 AM	65	53	No
12:30:00 AM	65	53	No
12:45:00 AM	64	53	No
1:00:00 AM	63	53	No
1:15:00 AM	66	53	No
1:30:00 AM	64	53	No
1:45:00 AM	63	53	No
2:00:00 AM	64	53	No
2:15:00 AM	76	53	No
2:30:00 AM	62	53	No
2:45:00 AM	64	53	No
3:00:00 AM	66	53	No
3:15:00 AM	64	53	No
3:30:00 AM	66	53	No
3:45:00 AM	62	53	No
4:00:00 AM	63	53	No
4:15:00 AM	61	53	No
4:30:00 AM	61	53	No
4:45:00 AM	63	53	No
5:00:00 AM	57	53	No
5:15:00 AM	57	53	No
5:30:00 AM	58	53	No
5:45:00 AM	58	53	No
6:00:00 AM	58	53	No
6:15:00 AM	60	53	No
6:30:00 AM	62	53	No
6:45:00 AM	62	53	No
7:00:00 AM	63	53	No
7:15:00 AM	63	53	No
7:30:00 AM	63	53	No
7:45:00 AM	64	53	No
8:00:00 AM	67	53	No
8:15:00 AM	68	53	No
8:30:00 AM	68	53	No
8:45:00 AM	66	53	No
9:00:00 AM	68	53	No
9:15:00 AM	65	53	No
9:30:00 AM	66	53	No
9:45:00 AM	67	53	No
10:00:00 AM	67	53	No
10:15:00 AM	67	53	No
10:30:00 AM	67	53	No
10:45:00 AM	67	53	No
11:00:00 AM	69	53	No
11:15:00 AM	67	53	No
11:30:00 AM	68	53	No
11:45:00 AM	70	53	No
12:00:00 PM	68	53	No
12:15:00 PM	68	53	No
12:30:00 PM	70	53	No
12:45:00 PM	70	53	No
1:00:00 PM	71	53	No
1:15:00 PM	70	53	No
1:30:00 PM	68	53	No
1:45:00 PM	69	53	No
2:00:00 PM	69	53	No

RD10 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	69	53	No
2:30:00 PM	68	53	No
2:45:00 PM	70	53	No
3:00:00 PM	69	53	No
3:15:00 PM	68	53	No
3:30:00 PM	69	53	No
3:45:00 PM	68	53	No
4:00:00 PM	69	53	No
4:15:00 PM	68	53	No
4:30:00 PM	69	53	No
4:45:00 PM	75	53	No
5:00:00 PM	68	53	No
5:15:00 PM	69	53	No
5:30:00 PM	68	53	No
5:45:00 PM	68	53	No
6:00:00 PM	67	53	No
6:15:00 PM	68	53	No
6:30:00 PM	67	53	No
6:45:00 PM	67	53	No
7:00:00 PM	69	53	No
7:15:00 PM	69	53	No
7:30:00 PM	71	53	No
7:45:00 PM	69	53	No
8:00:00 PM	69	53	No
8:15:00 PM	68	53	No
8:30:00 PM	68	53	No
8:45:00 PM	75	53	No
9:00:00 PM	69	53	No
9:15:00 PM	68	53	No
9:30:00 PM	68	53	No
9:45:00 PM	71	53	No
10:00:00 PM	68	53	No
10:15:00 PM	70	53	No
10:30:00 PM	68	53	No
10:45:00 PM	68	53	No
11:00:00 PM	66	53	No
11:15:00 PM	66	53	No
11:30:00 PM	66	53	No
11:45:00 PM	67	53	No

RD11 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	77	52	No
12:15:00 AM	78	52	No
12:30:00 AM	75	52	No
12:45:00 AM	74	52	No
1:00:00 AM	76	52	No
1:15:00 AM	74	52	No
1:30:00 AM	73	52	No
1:45:00 AM	77	52	No
2:00:00 AM	73	52	No
2:15:00 AM	73	52	No
2:30:00 AM	74	52	No
2:45:00 AM	72	52	No
3:00:00 AM	72	52	No
3:15:00 AM	71	52	No
3:30:00 AM	69	52	No
3:45:00 AM	75	52	No
4:00:00 AM	70	52	No
4:15:00 AM	72	52	No
4:30:00 AM	74	52	No
4:45:00 AM	75	52	No
5:00:00 AM	75	52	No
5:15:00 AM	77	52	No
5:30:00 AM	77	52	No
5:45:00 AM	78	52	No
6:00:00 AM	79	52	No
6:15:00 AM	79	52	No
6:30:00 AM	80	52	No
6:45:00 AM	81	52	No
7:00:00 AM	82	52	No
7:15:00 AM	82	52	No
7:30:00 AM	82	52	No
7:45:00 AM	82	52	No
8:00:00 AM	82	52	No
8:15:00 AM	82	52	No
8:30:00 AM	81	52	No
8:45:00 AM	81	52	No
9:00:00 AM	81	52	No
9:15:00 AM	91	52	No
9:30:00 AM	81	52	No
9:45:00 AM	81	52	No
10:00:00 AM	81	52	No
10:15:00 AM	81	52	No
10:30:00 AM	80	52	No
10:45:00 AM	80	52	No
11:00:00 AM	81	52	No
11:15:00 AM	80	52	No
11:30:00 AM	80	52	No
11:45:00 AM	81	52	No
12:00:00 PM	79	52	No
12:15:00 PM	81	52	No
12:30:00 PM	81	52	No
12:45:00 PM	81	52	No
1:00:00 PM	80	52	No
1:15:00 PM	81	52	No
1:30:00 PM	86	52	No
1:45:00 PM	87	52	No
2:00:00 PM	81	52	No

RD11 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	80	52	No
2:30:00 PM	79	52	No
2:45:00 PM	81	52	No
3:00:00 PM	81	52	No
3:15:00 PM	81	52	No
3:30:00 PM	80	52	No
3:45:00 PM	81	52	No
4:00:00 PM	81	52	No
4:15:00 PM	81	52	No
4:30:00 PM	81	52	No
4:45:00 PM	82	52	No
5:00:00 PM	80	52	No
5:15:00 PM	87	52	No
5:30:00 PM	85	52	No
5:45:00 PM	84	52	No
6:00:00 PM	87	52	No
6:15:00 PM	80	52	No
6:30:00 PM	91	52	No
6:45:00 PM	89	52	No
7:00:00 PM	84	52	No
7:15:00 PM	81	52	No
7:30:00 PM	81	52	No
7:45:00 PM	80	52	No
8:00:00 PM	83	52	No
8:15:00 PM	80	52	No
8:30:00 PM	80	52	No
8:45:00 PM	80	52	No
9:00:00 PM	81	52	No
9:15:00 PM	80	52	No
9:30:00 PM	79	52	No
9:45:00 PM	79	52	No
10:00:00 PM	78	52	No
10:15:00 PM	78	52	No
10:30:00 PM	81	52	No
10:45:00 PM	78	52	No
11:00:00 PM	78	52	No
11:15:00 PM	79	52	No
11:30:00 PM	77	52	No
11:45:00 PM	78	52	No

RD11 Elevated Receivers			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	75	52	No
12:15:00 AM	76	52	No
12:30:00 AM	73	52	No
12:45:00 AM	72	52	No
1:00:00 AM	74	52	No
1:15:00 AM	72	52	No
1:30:00 AM	71	52	No
1:45:00 AM	75	52	No
2:00:00 AM	71	52	No
2:15:00 AM	71	52	No
2:30:00 AM	72	52	No
2:45:00 AM	70	52	No
3:00:00 AM	70	52	No
3:15:00 AM	69	52	No
3:30:00 AM	67	52	No
3:45:00 AM	73	52	No
4:00:00 AM	68	52	No
4:15:00 AM	70	52	No
4:30:00 AM	72	52	No
4:45:00 AM	73	52	No
5:00:00 AM	73	52	No
5:15:00 AM	75	52	No
5:30:00 AM	75	52	No
5:45:00 AM	76	52	No
6:00:00 AM	77	52	No
6:15:00 AM	77	52	No
6:30:00 AM	78	52	No
6:45:00 AM	79	52	No
7:00:00 AM	80	52	No
7:15:00 AM	80	52	No
7:30:00 AM	80	52	No
7:45:00 AM	80	52	No
8:00:00 AM	80	52	No
8:15:00 AM	80	52	No
8:30:00 AM	79	52	No
8:45:00 AM	79	52	No
9:00:00 AM	79	52	No
9:15:00 AM	89	52	No
9:30:00 AM	79	52	No
9:45:00 AM	79	52	No
10:00:00 AM	79	52	No
10:15:00 AM	79	52	No
10:30:00 AM	78	52	No
10:45:00 AM	78	52	No
11:00:00 AM	79	52	No
11:15:00 AM	78	52	No
11:30:00 AM	78	52	No
11:45:00 AM	79	52	No
12:00:00 PM	77	52	No
12:15:00 PM	79	52	No
12:30:00 PM	79	52	No
12:45:00 PM	79	52	No
1:00:00 PM	78	52	No
1:15:00 PM	79	52	No
1:30:00 PM	84	52	No
1:45:00 PM	85	52	No
2:00:00 PM	79	52	No

RD11 Elevated Receivers			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	78	52	No
2:30:00 PM	77	52	No
2:45:00 PM	79	52	No
3:00:00 PM	79	52	No
3:15:00 PM	79	52	No
3:30:00 PM	78	52	No
3:45:00 PM	79	52	No
4:00:00 PM	79	52	No
4:15:00 PM	79	52	No
4:30:00 PM	79	52	No
4:45:00 PM	80	52	No
5:00:00 PM	78	52	No
5:15:00 PM	85	52	No
5:30:00 PM	83	52	No
5:45:00 PM	82	52	No
6:00:00 PM	85	52	No
6:15:00 PM	78	52	No
6:30:00 PM	89	52	No
6:45:00 PM	87	52	No
7:00:00 PM	82	52	No
7:15:00 PM	79	52	No
7:30:00 PM	79	52	No
7:45:00 PM	78	52	No
8:00:00 PM	81	52	No
8:15:00 PM	78	52	No
8:30:00 PM	78	52	No
8:45:00 PM	78	52	No
9:00:00 PM	79	52	No
9:15:00 PM	78	52	No
9:30:00 PM	77	52	No
9:45:00 PM	77	52	No
10:00:00 PM	76	52	No
10:15:00 PM	76	52	No
10:30:00 PM	79	52	No
10:45:00 PM	76	52	No
11:00:00 PM	76	52	No
11:15:00 PM	77	52	No
11:30:00 PM	75	52	No
11:45:00 PM	76	52	No

RD11 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	77	52	No
12:15:00 AM	76	52	No
12:30:00 AM	78	52	No
12:45:00 AM	76	52	No
1:00:00 AM	75	52	No
1:15:00 AM	75	52	No
1:30:00 AM	76	52	No
1:45:00 AM	74	52	No
2:00:00 AM	75	52	No
2:15:00 AM	78	52	No
2:30:00 AM	75	52	No
2:45:00 AM	75	52	No
3:00:00 AM	78	52	No
3:15:00 AM	75	52	No
3:30:00 AM	77	52	No
3:45:00 AM	72	52	No
4:00:00 AM	76	52	No
4:15:00 AM	72	52	No
4:30:00 AM	74	52	No
4:45:00 AM	76	52	No
5:00:00 AM	71	52	No
5:15:00 AM	70	52	No
5:30:00 AM	73	52	No
5:45:00 AM	71	52	No
6:00:00 AM	73	52	No
6:15:00 AM	74	52	No
6:30:00 AM	75	52	No
6:45:00 AM	74	52	No
7:00:00 AM	76	52	No
7:15:00 AM	76	52	No
7:30:00 AM	76	52	No
7:45:00 AM	76	52	No
8:00:00 AM	77	52	No
8:15:00 AM	83	52	No
8:30:00 AM	77	52	No
8:45:00 AM	77	52	No
9:00:00 AM	78	52	No
9:15:00 AM	77	52	No
9:30:00 AM	78	52	No
9:45:00 AM	79	52	No
10:00:00 AM	77	52	No
10:15:00 AM	78	52	No
10:30:00 AM	78	52	No
10:45:00 AM	81	52	No
11:00:00 AM	78	52	No
11:15:00 AM	78	52	No
11:30:00 AM	78	52	No
11:45:00 AM	86	52	No
12:00:00 PM	78	52	No
12:15:00 PM	79	52	No
12:30:00 PM	80	52	No
12:45:00 PM	80	52	No
1:00:00 PM	79	52	No
1:15:00 PM	79	52	No
1:30:00 PM	79	52	No
1:45:00 PM	79	52	No
2:00:00 PM	78	52	No

RD11 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	80	52	No
2:30:00 PM	79	52	No
2:45:00 PM	78	52	No
3:00:00 PM	79	52	No
3:15:00 PM	78	52	No
3:30:00 PM	78	52	No
3:45:00 PM	78	52	No
4:00:00 PM	82	52	No
4:15:00 PM	78	52	No
4:30:00 PM	78	52	No
4:45:00 PM	82	52	No
5:00:00 PM	79	52	No
5:15:00 PM	78	52	No
5:30:00 PM	78	52	No
5:45:00 PM	82	52	No
6:00:00 PM	78	52	No
6:15:00 PM	79	52	No
6:30:00 PM	79	52	No
6:45:00 PM	78	52	No
7:00:00 PM	80	52	No
7:15:00 PM	79	52	No
7:30:00 PM	80	52	No
7:45:00 PM	80	52	No
8:00:00 PM	80	52	No
8:15:00 PM	80	52	No
8:30:00 PM	79	52	No
8:45:00 PM	79	52	No
9:00:00 PM	82	52	No
9:15:00 PM	79	52	No
9:30:00 PM	78	52	No
9:45:00 PM	80	52	No
10:00:00 PM	78	52	No
10:15:00 PM	80	52	No
10:30:00 PM	79	52	No
10:45:00 PM	78	52	No
11:00:00 PM	77	52	No
11:15:00 PM	76	52	No
11:30:00 PM	80	52	No
11:45:00 PM	81	52	No

RD11 Weekends Elevated Receivers			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	75	52	No
12:15:00 AM	74	52	No
12:30:00 AM	76	52	No
12:45:00 AM	74	52	No
1:00:00 AM	73	52	No
1:15:00 AM	73	52	No
1:30:00 AM	74	52	No
1:45:00 AM	72	52	No
2:00:00 AM	73	52	No
2:15:00 AM	76	52	No
2:30:00 AM	73	52	No
2:45:00 AM	73	52	No
3:00:00 AM	76	52	No
3:15:00 AM	73	52	No
3:30:00 AM	75	52	No
3:45:00 AM	70	52	No
4:00:00 AM	74	52	No
4:15:00 AM	70	52	No
4:30:00 AM	72	52	No
4:45:00 AM	74	52	No
5:00:00 AM	69	52	No
5:15:00 AM	68	52	No
5:30:00 AM	71	52	No
5:45:00 AM	69	52	No
6:00:00 AM	71	52	No
6:15:00 AM	72	52	No
6:30:00 AM	73	52	No
6:45:00 AM	72	52	No
7:00:00 AM	74	52	No
7:15:00 AM	74	52	No
7:30:00 AM	74	52	No
7:45:00 AM	74	52	No
8:00:00 AM	75	52	No
8:15:00 AM	81	52	No
8:30:00 AM	75	52	No
8:45:00 AM	75	52	No
9:00:00 AM	76	52	No
9:15:00 AM	75	52	No
9:30:00 AM	76	52	No
9:45:00 AM	77	52	No
10:00:00 AM	75	52	No
10:15:00 AM	76	52	No
10:30:00 AM	76	52	No
10:45:00 AM	79	52	No
11:00:00 AM	76	52	No
11:15:00 AM	76	52	No
11:30:00 AM	76	52	No
11:45:00 AM	84	52	No
12:00:00 PM	76	52	No
12:15:00 PM	77	52	No
12:30:00 PM	78	52	No
12:45:00 PM	78	52	No
1:00:00 PM	77	52	No
1:15:00 PM	77	52	No
1:30:00 PM	77	52	No
1:45:00 PM	77	52	No
2:00:00 PM	76	52	No

RD11 Weekends Elevated Receivers			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	77	52	No
2:30:00 PM	77	52	No
2:45:00 PM	76	52	No
3:00:00 PM	77	52	No
3:15:00 PM	76	52	No
3:30:00 PM	76	52	No
3:45:00 PM	76	52	No
4:00:00 PM	80	52	No
4:15:00 PM	76	52	No
4:30:00 PM	76	52	No
4:45:00 PM	80	52	No
5:00:00 PM	77	52	No
5:15:00 PM	76	52	No
5:30:00 PM	76	52	No
5:45:00 PM	80	52	No
6:00:00 PM	76	52	No
6:15:00 PM	77	52	No
6:30:00 PM	77	52	No
6:45:00 PM	75	52	No
7:00:00 PM	78	52	No
7:15:00 PM	77	52	No
7:30:00 PM	78	52	No
7:45:00 PM	78	52	No
8:00:00 PM	78	52	No
8:15:00 PM	78	52	No
8:30:00 PM	77	52	No
8:45:00 PM	77	52	No
9:00:00 PM	80	52	No
9:15:00 PM	77	52	No
9:30:00 PM	76	52	No
9:45:00 PM	78	52	No
10:00:00 PM	76	52	No
10:15:00 PM	78	52	No
10:30:00 PM	77	52	No
10:45:00 PM	76	52	No
11:00:00 PM	75	52	No
11:15:00 PM	74	52	No
11:30:00 PM	78	52	No
11:45:00 PM	79	52	No

RD12 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	70	43	No
12:15:00 AM	68	43	No
12:30:00 AM	68	43	No
12:45:00 AM	69	43	No
1:00:00 AM	72	43	No
1:15:00 AM	64	43	No
1:30:00 AM	69	43	No
1:45:00 AM	67	43	No
2:00:00 AM	64	43	No
2:15:00 AM	65	43	No
2:30:00 AM	73	43	No
2:45:00 AM	70	43	No
3:00:00 AM	77	43	No
3:15:00 AM	70	43	No
3:30:00 AM	63	43	No
3:45:00 AM	67	43	No
4:00:00 AM	64	43	No
4:15:00 AM	62	43	No
4:30:00 AM	65	43	No
4:45:00 AM	72	43	No
5:00:00 AM	67	43	No
5:15:00 AM	66	43	No
5:30:00 AM	71	43	No
5:45:00 AM	72	43	No
6:00:00 AM	70	43	No
6:15:00 AM	74	43	No
6:30:00 AM	73	43	No
6:45:00 AM	72	43	No
7:00:00 AM	73	43	No
7:15:00 AM	74	43	No
7:30:00 AM	73	43	No
7:45:00 AM	74	43	No
8:00:00 AM	75	43	No
8:15:00 AM	75	43	No
8:30:00 AM	76	43	No
8:45:00 AM	75	43	No
9:00:00 AM	76	43	No
9:15:00 AM	76	43	No
9:30:00 AM	75	43	No
9:45:00 AM	77	43	No
10:00:00 AM	77	43	No
10:15:00 AM	76	43	No
10:30:00 AM	76	43	No
10:45:00 AM	75	43	No
11:00:00 AM	76	43	No
11:15:00 AM	74	43	No
11:30:00 AM	75	43	No
11:45:00 AM	76	43	No
12:00:00 PM	76	43	No
12:15:00 PM	82	43	No
12:30:00 PM	75	43	No
12:45:00 PM	76	43	No
1:00:00 PM	75	43	No
1:15:00 PM	76	43	No
1:30:00 PM	75	43	No
1:45:00 PM	75	43	No
2:00:00 PM	75	43	No

RD12 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	75	43	No
2:30:00 PM	75	43	No
2:45:00 PM	74	43	No
3:00:00 PM	75	43	No
3:15:00 PM	75	43	No
3:30:00 PM	74	43	No
3:45:00 PM	75	43	No
4:00:00 PM	76	43	No
4:15:00 PM	74	43	No
4:30:00 PM	75	43	No
4:45:00 PM	79	43	No
5:00:00 PM	76	43	No
5:15:00 PM	74	43	No
5:30:00 PM	76	43	No
5:45:00 PM	75	43	No
6:00:00 PM	75	43	No
6:15:00 PM	74	43	No
6:30:00 PM	74	43	No
6:45:00 PM	76	43	No
7:00:00 PM	74	43	No
7:15:00 PM	73	43	No
7:30:00 PM	72	43	No
7:45:00 PM	72	43	No
8:00:00 PM	71	43	No
8:15:00 PM	72	43	No
8:30:00 PM	72	43	No
8:45:00 PM	71	43	No
9:00:00 PM	72	43	No
9:15:00 PM	72	43	No
9:30:00 PM	74	43	No
9:45:00 PM	71	43	No
10:00:00 PM	74	43	No
10:15:00 PM	73	43	No
10:30:00 PM	72	43	No
10:45:00 PM	69	43	No
11:00:00 PM	71	43	No
11:15:00 PM	71	43	No
11:30:00 PM	69	43	No
11:45:00 PM	69	43	No

RD12 Elevated Receiver			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	67	43	No
12:15:00 AM	66	43	No
12:30:00 AM	65	43	No
12:45:00 AM	67	43	No
1:00:00 AM	69	43	No
1:15:00 AM	61	43	No
1:30:00 AM	67	43	No
1:45:00 AM	64	43	No
2:00:00 AM	62	43	No
2:15:00 AM	62	43	No
2:30:00 AM	70	43	No
2:45:00 AM	68	43	No
3:00:00 AM	74	43	No
3:15:00 AM	68	43	No
3:30:00 AM	61	43	No
3:45:00 AM	65	43	No
4:00:00 AM	61	43	No
4:15:00 AM	59	43	No
4:30:00 AM	63	43	No
4:45:00 AM	70	43	No
5:00:00 AM	65	43	No
5:15:00 AM	64	43	No
5:30:00 AM	68	43	No
5:45:00 AM	69	43	No
6:00:00 AM	68	43	No
6:15:00 AM	72	43	No
6:30:00 AM	70	43	No
6:45:00 AM	70	43	No
7:00:00 AM	71	43	No
7:15:00 AM	72	43	No
7:30:00 AM	71	43	No
7:45:00 AM	72	43	No
8:00:00 AM	72	43	No
8:15:00 AM	73	43	No
8:30:00 AM	74	43	No
8:45:00 AM	73	43	No
9:00:00 AM	73	43	No
9:15:00 AM	73	43	No
9:30:00 AM	72	43	No
9:45:00 AM	74	43	No
10:00:00 AM	74	43	No
10:15:00 AM	73	43	No
10:30:00 AM	73	43	No
10:45:00 AM	73	43	No
11:00:00 AM	73	43	No
11:15:00 AM	72	43	No
11:30:00 AM	72	43	No
11:45:00 AM	73	43	No
12:00:00 PM	73	43	No
12:15:00 PM	79	43	No
12:30:00 PM	73	43	No
12:45:00 PM	74	43	No
1:00:00 PM	73	43	No
1:15:00 PM	74	43	No
1:30:00 PM	73	43	No
1:45:00 PM	72	43	No
2:00:00 PM	73	43	No

RD12 Elevated Receiver			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	72	43	No
2:30:00 PM	73	43	No
2:45:00 PM	72	43	No
3:00:00 PM	73	43	No
3:15:00 PM	72	43	No
3:30:00 PM	72	43	No
3:45:00 PM	73	43	No
4:00:00 PM	74	43	No
4:15:00 PM	72	43	No
4:30:00 PM	73	43	No
4:45:00 PM	76	43	No
5:00:00 PM	74	43	No
5:15:00 PM	72	43	No
5:30:00 PM	73	43	No
5:45:00 PM	73	43	No
6:00:00 PM	72	43	No
6:15:00 PM	72	43	No
6:30:00 PM	72	43	No
6:45:00 PM	73	43	No
7:00:00 PM	71	43	No
7:15:00 PM	70	43	No
7:30:00 PM	69	43	No
7:45:00 PM	70	43	No
8:00:00 PM	69	43	No
8:15:00 PM	69	43	No
8:30:00 PM	69	43	No
8:45:00 PM	68	43	No
9:00:00 PM	69	43	No
9:15:00 PM	70	43	No
9:30:00 PM	71	43	No
9:45:00 PM	68	43	No
10:00:00 PM	72	43	No
10:15:00 PM	70	43	No
10:30:00 PM	70	43	No
10:45:00 PM	67	43	No
11:00:00 PM	69	43	No
11:15:00 PM	68	43	No
11:30:00 PM	66	43	No
11:45:00 PM	67	43	No

RD13 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	76	50	No
12:15:00 AM	75	50	No
12:30:00 AM	74	50	No
12:45:00 AM	88	50	No
1:00:00 AM	73	50	No
1:15:00 AM	72	50	No
1:30:00 AM	87	50	No
1:45:00 AM	82	50	No
2:00:00 AM	77	50	No
2:15:00 AM	74	50	No
2:30:00 AM	74	50	No
2:45:00 AM	71	50	No
3:00:00 AM	72	50	No
3:15:00 AM	72	50	No
3:30:00 AM	71	50	No
3:45:00 AM	71	50	No
4:00:00 AM	72	50	No
4:15:00 AM	70	50	No
4:30:00 AM	73	50	No
4:45:00 AM	75	50	No
5:00:00 AM	75	50	No
5:15:00 AM	75	50	No
5:30:00 AM	77	50	No
5:45:00 AM	77	50	No
6:00:00 AM	78	50	No
6:15:00 AM	79	50	No
6:30:00 AM	84	50	No
6:45:00 AM	86	50	No
7:00:00 AM	84	50	No
7:15:00 AM	84	50	No
7:30:00 AM	84	50	No
7:45:00 AM	82	50	No
8:00:00 AM	84	50	No
8:15:00 AM	80	50	No
8:30:00 AM	81	50	No
8:45:00 AM	81	50	No
9:00:00 AM	80	50	No
9:15:00 AM	80	50	No
9:30:00 AM	80	50	No
9:45:00 AM	79	50	No
10:00:00 AM	83	50	No
10:15:00 AM	79	50	No
10:30:00 AM	79	50	No
10:45:00 AM	79	50	No
11:00:00 AM	79	50	No
11:15:00 AM	79	50	No
11:30:00 AM	79	50	No
11:45:00 AM	79	50	No
12:00:00 PM	79	50	No
12:15:00 PM	79	50	No
12:30:00 PM	78	50	No
12:45:00 PM	78	50	No
1:00:00 PM	80	50	No
1:15:00 PM	80	50	No
1:30:00 PM	79	50	No
1:45:00 PM	79	50	No
2:00:00 PM	81	50	No

RD13 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	78	50	No
2:30:00 PM	78	50	No
2:45:00 PM	79	50	No
3:00:00 PM	78	50	No
3:15:00 PM	79	50	No
3:30:00 PM	79	50	No
3:45:00 PM	78	50	No
4:00:00 PM	79	50	No
4:15:00 PM	85	50	No
4:30:00 PM	78	50	No
4:45:00 PM	80	50	No
5:00:00 PM	79	50	No
5:15:00 PM	78	50	No
5:30:00 PM	77	50	No
5:45:00 PM	77	50	No
6:00:00 PM	78	50	No
6:15:00 PM	78	50	No
6:30:00 PM	77	50	No
6:45:00 PM	78	50	No
7:00:00 PM	78	50	No
7:15:00 PM	78	50	No
7:30:00 PM	78	50	No
7:45:00 PM	80	50	No
8:00:00 PM	78	50	No
8:15:00 PM	78	50	No
8:30:00 PM	78	50	No
8:45:00 PM	78	50	No
9:00:00 PM	78	50	No
9:15:00 PM	78	50	No
9:30:00 PM	78	50	No
9:45:00 PM	77	50	No
10:00:00 PM	85	50	No
10:15:00 PM	79	50	No
10:30:00 PM	78	50	No
10:45:00 PM	76	50	No
11:00:00 PM	77	50	No
11:15:00 PM	77	50	No
11:30:00 PM	75	50	No
11:45:00 PM	76	50	No

RD13 Elevated Receiver			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	75	50	No
12:15:00 AM	74	50	No
12:30:00 AM	73	50	No
12:45:00 AM	87	50	No
1:00:00 AM	72	50	No
1:15:00 AM	71	50	No
1:30:00 AM	86	50	No
1:45:00 AM	81	50	No
2:00:00 AM	76	50	No
2:15:00 AM	73	50	No
2:30:00 AM	73	50	No
2:45:00 AM	70	50	No
3:00:00 AM	71	50	No
3:15:00 AM	71	50	No
3:30:00 AM	70	50	No
3:45:00 AM	70	50	No
4:00:00 AM	71	50	No
4:15:00 AM	70	50	No
4:30:00 AM	72	50	No
4:45:00 AM	74	50	No
5:00:00 AM	74	50	No
5:15:00 AM	74	50	No
5:30:00 AM	76	50	No
5:45:00 AM	76	50	No
6:00:00 AM	77	50	No
6:15:00 AM	78	50	No
6:30:00 AM	83	50	No
6:45:00 AM	85	50	No
7:00:00 AM	83	50	No
7:15:00 AM	83	50	No
7:30:00 AM	83	50	No
7:45:00 AM	81	50	No
8:00:00 AM	84	50	No
8:15:00 AM	80	50	No
8:30:00 AM	80	50	No
8:45:00 AM	80	50	No
9:00:00 AM	79	50	No
9:15:00 AM	79	50	No
9:30:00 AM	79	50	No
9:45:00 AM	78	50	No
10:00:00 AM	82	50	No
10:15:00 AM	78	50	No
10:30:00 AM	78	50	No
10:45:00 AM	78	50	No
11:00:00 AM	78	50	No
11:15:00 AM	78	50	No
11:30:00 AM	78	50	No
11:45:00 AM	78	50	No
12:00:00 PM	78	50	No
12:15:00 PM	78	50	No
12:30:00 PM	77	50	No
12:45:00 PM	78	50	No
1:00:00 PM	79	50	No
1:15:00 PM	79	50	No
1:30:00 PM	78	50	No
1:45:00 PM	78	50	No
2:00:00 PM	80	50	No

RD13 Elevated Receiver			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	77	50	No
2:30:00 PM	77	50	No
2:45:00 PM	78	50	No
3:00:00 PM	77	50	No
3:15:00 PM	78	50	No
3:30:00 PM	78	50	No
3:45:00 PM	77	50	No
4:00:00 PM	78	50	No
4:15:00 PM	84	50	No
4:30:00 PM	77	50	No
4:45:00 PM	79	50	No
5:00:00 PM	78	50	No
5:15:00 PM	77	50	No
5:30:00 PM	77	50	No
5:45:00 PM	76	50	No
6:00:00 PM	77	50	No
6:15:00 PM	77	50	No
6:30:00 PM	76	50	No
6:45:00 PM	77	50	No
7:00:00 PM	77	50	No
7:15:00 PM	77	50	No
7:30:00 PM	77	50	No
7:45:00 PM	79	50	No
8:00:00 PM	77	50	No
8:15:00 PM	77	50	No
8:30:00 PM	77	50	No
8:45:00 PM	77	50	No
9:00:00 PM	77	50	No
9:15:00 PM	78	50	No
9:30:00 PM	77	50	No
9:45:00 PM	76	50	No
10:00:00 PM	85	50	No
10:15:00 PM	78	50	No
10:30:00 PM	77	50	No
10:45:00 PM	75	50	No
11:00:00 PM	76	50	No
11:15:00 PM	76	50	No
11:30:00 PM	75	50	No
11:45:00 PM	75	50	No

RD13 Elevated Receiver -Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	76	50	No
12:15:00 AM	75	50	No
12:30:00 AM	77	50	No
12:45:00 AM	75	50	No
1:00:00 AM	75	50	No
1:15:00 AM	75	50	No
1:30:00 AM	76	50	No
1:45:00 AM	75	50	No
2:00:00 AM	72	50	No
2:15:00 AM	81	50	No
2:30:00 AM	71	50	No
2:45:00 AM	70	50	No
3:00:00 AM	73	50	No
3:15:00 AM	73	50	No
3:30:00 AM	74	50	No
3:45:00 AM	72	50	No
4:00:00 AM	73	50	No
4:15:00 AM	73	50	No
4:30:00 AM	73	50	No
4:45:00 AM	75	50	No
5:00:00 AM	74	50	No
5:15:00 AM	75	50	No
5:30:00 AM	74	50	No
5:45:00 AM	75	50	No
6:00:00 AM	75	50	No
6:15:00 AM	75	50	No
6:30:00 AM	76	50	No
6:45:00 AM	77	50	No
7:00:00 AM	76	50	No
7:15:00 AM	77	50	No
7:30:00 AM	74	50	No
7:45:00 AM	75	50	No
8:00:00 AM	75	50	No
8:15:00 AM	75	50	No
8:30:00 AM	76	50	No
8:45:00 AM	76	50	No
9:00:00 AM	76	50	No
9:15:00 AM	75	50	No
9:30:00 AM	77	50	No
9:45:00 AM	76	50	No
10:00:00 AM	77	50	No
10:15:00 AM	76	50	No
10:30:00 AM	76	50	No
10:45:00 AM	76	50	No
11:00:00 AM	76	50	No
11:15:00 AM	79	50	No
11:30:00 AM	78	50	No
11:45:00 AM	78	50	No
12:00:00 PM	78	50	No
12:15:00 PM	75	50	No
12:30:00 PM	77	50	No
12:45:00 PM	76	50	No
1:00:00 PM	77	50	No
1:15:00 PM	85	50	No
1:30:00 PM	87	50	No
1:45:00 PM	81	50	No
2:00:00 PM	78	50	No

RD13 Elevated Receiver - Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	77	50	No
2:30:00 PM	78	50	No
2:45:00 PM	77	50	No
3:00:00 PM	76	50	No
3:15:00 PM	76	50	No
3:30:00 PM	78	50	No
3:45:00 PM	77	50	No
4:00:00 PM	76	50	No
4:15:00 PM	76	50	No
4:30:00 PM	76	50	No
4:45:00 PM	76	50	No
5:00:00 PM	81	50	No
5:15:00 PM	78	50	No
5:30:00 PM	76	50	No
5:45:00 PM	75	50	No
6:00:00 PM	76	50	No
6:15:00 PM	76	50	No
6:30:00 PM	76	50	No
6:45:00 PM	76	50	No
7:00:00 PM	77	50	No
7:15:00 PM	78	50	No
7:30:00 PM	77	50	No
7:45:00 PM	83	50	No
8:00:00 PM	80	50	No
8:15:00 PM	78	50	No
8:30:00 PM	78	50	No
8:45:00 PM	79	50	No
9:00:00 PM	78	50	No
9:15:00 PM	79	50	No
9:30:00 PM	77	50	No
9:45:00 PM	77	50	No
10:00:00 PM	77	50	No
10:15:00 PM	81	50	No
10:30:00 PM	76	50	No
10:45:00 PM	77	50	No
11:00:00 PM	77	50	No
11:15:00 PM	78	50	No
11:30:00 PM	82	50	No
11:45:00 PM	76	50	No

RD14 Elevated Receiver			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	70	57	No
12:15:00 AM	70	57	No
12:30:00 AM	67	57	No
12:45:00 AM	79	57	No
1:00:00 AM	67	57	No
1:15:00 AM	65	57	No
1:30:00 AM	77	57	No
1:45:00 AM	74	57	No
2:00:00 AM	64	57	No
2:15:00 AM	65	57	No
2:30:00 AM	66	57	No
2:45:00 AM	66	57	No
3:00:00 AM	70	57	No
3:15:00 AM	67	57	No
3:30:00 AM	64	57	No
3:45:00 AM	64	57	No
4:00:00 AM	65	57	No
4:15:00 AM	65	57	No
4:30:00 AM	68	57	No
4:45:00 AM	69	57	No
5:00:00 AM	69	57	No
5:15:00 AM	72	57	No
5:30:00 AM	71	57	No
5:45:00 AM	72	57	No
6:00:00 AM	72	57	No
6:15:00 AM	72	57	No
6:30:00 AM	74	57	No
6:45:00 AM	75	57	No
7:00:00 AM	73	57	No
7:15:00 AM	74	57	No
7:30:00 AM	76	57	No
7:45:00 AM	75	57	No
8:00:00 AM	75	57	No
8:15:00 AM	74	57	No
8:30:00 AM	75	57	No
8:45:00 AM	76	57	No
9:00:00 AM	75	57	No
9:15:00 AM	76	57	No
9:30:00 AM	75	57	No
9:45:00 AM	74	57	No
10:00:00 AM	78	57	No
10:15:00 AM	74	57	No
10:30:00 AM	73	57	No
10:45:00 AM	75	57	No
11:00:00 AM	73	57	No
11:15:00 AM	73	57	No
11:30:00 AM	73	57	No
11:45:00 AM	74	57	No
12:00:00 PM	76	57	No
12:15:00 PM	74	57	No
12:30:00 PM	73	57	No
12:45:00 PM	72	57	No
1:00:00 PM	74	57	No
1:15:00 PM	74	57	No
1:30:00 PM	73	57	No
1:45:00 PM	73	57	No
2:00:00 PM	74	57	No
2:15:00 PM	73	57	No
2:30:00 PM	74	57	No

RD14 Elevated Receiver			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2 45:00 PM	76	57	No
3 00:00 PM	74	57	No
3 15:00 PM	73	57	No
3 30:00 PM	74	57	No
3 45:00 PM	74	57	No
4 00:00 PM	74	57	No
4 15:00 PM	73	57	No
4 30:00 PM	73	57	No
4 45:00 PM	73	57	No
5 00:00 PM	73	57	No
5 15:00 PM	74	57	No
5 30:00 PM	73	57	No
5 45:00 PM	73	57	No
6 00:00 PM	74	57	No
6 15:00 PM	71	57	No
6 30:00 PM	71	57	No
6 45:00 PM	71	57	No
7 00:00 PM	73	57	No
7 15:00 PM	73	57	No
7 30:00 PM	72	57	No
7 45:00 PM	72	57	No
8 00 00 PM	72	57	No
8 15:00 PM	72	57	No
8 30:00 PM	72	57	No
8 45 00 PM	71	57	No
9 00 00 PM	71	57	No
9 15 00 PM	72	57	No
9 30 00 PM	73	57	No
9 45 00 PM	70	57	No
10 00:00 PM	79	57	No
10 15 00 PM	71	57	No
10 30 00 PM	76	57	No
10 45 00 PM	70	57	No
11 00 00 PM	70	57	No
11 15 00 PM	70	57	No
11 30 00 PM	69	57	No
11 45 00 PM	69	57	No

RD14 Elevated Receiver - Weekend			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	68	57	No
12:15:00 AM	69	57	No
12:30:00 AM	68	57	No
12:45:00 AM	66	57	No
1:00:00 AM	66	57	No
1:15:00 AM	66	57	No
1:30:00 AM	66	57	No
1:45:00 AM	65	57	No
2:00:00 AM	64	57	No
2:15:00 AM	68	57	No
2:30:00 AM	64	57	No
2:45:00 AM	66	57	No
3:00:00 AM	67	57	No
3:15:00 AM	66	57	No
3:30:00 AM	66	57	No
3:45:00 AM	63	57	No
4:00:00 AM	62	57	No
4:15:00 AM	62	57	No
4:30:00 AM	63	57	No
4:45:00 AM	65	57	No
5:00:00 AM	61	57	No
5:15:00 AM	60	57	No
5:30:00 AM	64	57	No
5:45:00 AM	64	57	No
6:00:00 AM	62	57	No
6:15:00 AM	65	57	No
6:30:00 AM	66	57	No
6:45:00 AM	66	57	No
7:00:00 AM	68	57	No
7:15:00 AM	67	57	No
7:30:00 AM	68	57	No
7:45:00 AM	68	57	No
8:00:00 AM	68	57	No
8:15:00 AM	69	57	No
8:30:00 AM	68	57	No
8:45:00 AM	69	57	No
9:00:00 AM	70	57	No
9:15:00 AM	69	57	No
9:30:00 AM	69	57	No
9:45:00 AM	71	57	No
10:00:00 AM	69	57	No
10:15:00 AM	70	57	No
10:30:00 AM	69	57	No
10:45:00 AM	70	57	No
11:00:00 AM	69	57	No
11:15:00 AM	69	57	No
11:30:00 AM	70	57	No
11:45:00 AM	74	57	No
12:00:00 PM	70	57	No
12:15:00 PM	70	57	No
12:30:00 PM	71	57	No
12:45:00 PM	71	57	No
1:00:00 PM	71	57	No
1:15:00 PM	70	57	No
1:30:00 PM	69	57	No
1:45:00 PM	70	57	No
2:00:00 PM	70	57	No
2:15:00 PM	71	57	No
2:30:00 PM	70	57	No

RD14 Elevated Receiver - Weekend			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:45:00 PM	71	57	No
3:00:00 PM	72	57	No
3:15:00 PM	69	57	No
3:30:00 PM	69	57	No
3:45:00 PM	69	57	No
4:00:00 PM	74	57	No
4:15:00 PM	69	57	No
4:30:00 PM	70	57	No
4:45:00 PM	73	57	No
5:00:00 PM	70	57	No
5:15:00 PM	69	57	No
5:30:00 PM	70	57	No
5:45:00 PM	71	57	No
6:00:00 PM	69	57	No
6:15:00 PM	70	57	No
6:30:00 PM	69	57	No
6:45:00 PM	70	57	No
7:00:00 PM	71	57	No
7:15:00 PM	72	57	No
7:30:00 PM	71	57	No
7:45:00 PM	71	57	No
8:00:00 PM	71	57	No
8:15:00 PM	71	57	No
8:30:00 PM	71	57	No
8:45:00 PM	71	57	No
9:00:00 PM	71	57	No
9:15:00 PM	70	57	No
9:30:00 PM	70	57	No
9:45:00 PM	71	57	No
10:00:00 PM	69	57	No
10:15:00 PM	70	57	No
10:30:00 PM	70	57	No
10:45:00 PM	69	57	No
11:00:00 PM	69	57	No
11:15:00 PM	70	57	No
11:30:00 PM	69	57	No
11:45:00 PM	72	57	No

RD15 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	63	58	No
12:15:00 AM	63	58	No
12:30:00 AM	63	58	No
12:45:00 AM	76	58	No
1:00:00 AM	75	58	No
1:15:00 AM	61	58	No
1:30:00 AM	74	58	No
1:45:00 AM	69	58	No
2:00:00 AM	61	58	No
2:15:00 AM	61	58	No
2:30:00 AM	64	58	No
2:45:00 AM	64	58	No
3:00:00 AM	64	58	No
3:15:00 AM	62	58	No
3:30:00 AM	64	58	No
3:45:00 AM	61	58	No
4:00:00 AM	61	58	No
4:15:00 AM	62	58	No
4:30:00 AM	63	58	No
4:45:00 AM	64	58	No
5:00:00 AM	69	58	No
5:15:00 AM	63	58	No
5:30:00 AM	65	58	No
5:45:00 AM	64	58	No
6:00:00 AM	68	58	No
6:15:00 AM	71	58	No
6:30:00 AM	78	58	No
6:45:00 AM	75	58	No
7:00:00 AM	71	58	No
7:15:00 AM	76	58	No
7:30:00 AM	71	58	No
7:45:00 AM	72	58	No
8:00:00 AM	72	58	No
8:15:00 AM	74	58	No
8:30:00 AM	75	58	No
8:45:00 AM	74	58	No
9:00:00 AM	74	58	No
9:15:00 AM	76	58	No
9:30:00 AM	76	58	No
9:45:00 AM	76	58	No
10:00:00 AM	75	58	No
10:15:00 AM	72	58	No
10:30:00 AM	70	58	No
10:45:00 AM	73	58	No
11:00:00 AM	72	58	No
11:15:00 AM	76	58	No
11:30:00 AM	71	58	No
11:45:00 AM	74	58	No
12:00:00 PM	73	58	No
12:15:00 PM	68	58	No
12:30:00 PM	71	58	No
12:45:00 PM	75	58	No
1:00:00 PM	78	58	No
1:15:00 PM	78	58	No
1:30:00 PM	75	58	No
1:45:00 PM	73	58	No

RD15 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:00:00 PM	76	58	No
2:15:00 PM	74	58	No
2:30:00 PM	76	58	No
2:45:00 PM	75	58	No
3:00:00 PM	75	58	No
3:15:00 PM	75	58	No
3:30:00 PM	74	58	No
3:45:00 PM	74	58	No
4:00:00 PM	73	58	No
4:15:00 PM	82	58	No
4:30:00 PM	74	58	No
4:45:00 PM	77	58	No
5:00:00 PM	69	58	No
5:15:00 PM	68	58	No
5:30:00 PM	67	58	No
5:45:00 PM	68	58	No
6:00:00 PM	70	58	No
6:15:00 PM	66	58	No
6:30:00 PM	66	58	No
6:45:00 PM	72	58	No
7:00:00 PM	68	58	No
7:15:00 PM	67	58	No
7:30:00 PM	66	58	No
7:45:00 PM	67	58	No
8:00:00 PM	66	58	No
8:15:00 PM	65	58	No
8:30:00 PM	66	58	No
8:45:00 PM	68	58	No
9:00:00 PM	68	58	No
9:15:00 PM	71	58	No
9:30:00 PM	67	58	No
9:45:00 PM	74	58	No
10:00:00 PM	82	58	No
10:15:00 PM	78	58	No
10:30:00 PM	72	58	No
10:45:00 PM	67	58	No
11:00:00 PM	65	58	No
11:15:00 PM	65	58	No
11:30:00 PM	68	58	No
11:45:00 PM	66	58	No

RD15 Elevated Receivers			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	65	59	No
12:15:00 AM	65	59	No
12:30:00 AM	64	59	No
12:45:00 AM	78	59	No
1:00:00 AM	77	59	No
1:15:00 AM	63	59	No
1:30:00 AM	75	59	No
1:45:00 AM	71	59	No
2:00:00 AM	63	59	No
2:15:00 AM	63	59	No
2:30:00 AM	66	59	No
2:45:00 AM	65	59	No
3:00:00 AM	65	59	No
3:15:00 AM	63	59	No
3:30:00 AM	66	59	No
3:45:00 AM	63	59	No
4:00:00 AM	63	59	No
4:15:00 AM	63	59	No
4:30:00 AM	64	59	No
4:45:00 AM	66	59	No
5:00:00 AM	71	59	No
5:15:00 AM	65	59	No
5:30:00 AM	67	59	No
5:45:00 AM	66	59	No
6:00:00 AM	70	59	No
6:15:00 AM	72	59	No
6:30:00 AM	80	59	No
6:45:00 AM	76	59	No
7:00:00 AM	72	59	No
7:15:00 AM	77	59	No
7:30:00 AM	72	59	No
7:45:00 AM	74	59	No
8:00:00 AM	74	59	No
8:15:00 AM	75	59	No
8:30:00 AM	77	59	No
8:45:00 AM	76	59	No
9:00:00 AM	75	59	No
9:15:00 AM	77	59	No
9:30:00 AM	77	59	No
9:45:00 AM	78	59	No
10:00:00 AM	76	59	No
10:15:00 AM	74	59	No
10:30:00 AM	71	59	No
10:45:00 AM	74	59	No
11:00:00 AM	74	59	No
11:15:00 AM	78	59	No
11:30:00 AM	73	59	No
11:45:00 AM	76	59	No
12:00:00 PM	74	59	No
12:15:00 PM	70	59	No
12:30:00 PM	72	59	No
12:45:00 PM	77	59	No
1:00:00 PM	80	59	No
1:15:00 PM	80	59	No
1:30:00 PM	77	59	No
1:45:00 PM	75	59	No
2:00:00 PM	77	59	No

RD15 Elevated Receivers			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	75	59	No
2:30:00 PM	77	59	No
2:45:00 PM	77	59	No
3:00:00 PM	76	59	No
3:15:00 PM	76	59	No
3:30:00 PM	76	59	No
3:45:00 PM	76	59	No
4:00:00 PM	75	59	No
4:15:00 PM	84	59	No
4:30:00 PM	75	59	No
4:45:00 PM	78	59	No
5:00:00 PM	70	59	No
5:15:00 PM	70	59	No
5:30:00 PM	69	59	No
5:45:00 PM	70	59	No
6:00:00 PM	71	59	No
6:15:00 PM	68	59	No
6:30:00 PM	67	59	No
6:45:00 PM	74	59	No
7:00:00 PM	69	59	No
7:15:00 PM	68	59	No
7:30:00 PM	67	59	No
7:45:00 PM	68	59	No
8:00:00 PM	68	59	No
8:15:00 PM	67	59	No
8:30:00 PM	68	59	No
8:45:00 PM	69	59	No
9:00:00 PM	70	59	No
9:15:00 PM	72	59	No
9:30:00 PM	69	59	No
9:45:00 PM	76	59	No
10:00:00 PM	83	59	No
10:15:00 PM	79	59	No
10:30:00 PM	74	59	No
10:45:00 PM	68	59	No
11:00:00 PM	67	59	No
11:15:00 PM	67	59	No
11:30:00 PM	69	59	No
11:45:00 PM	67	59	No

RD15 Elevated Receivers -Weekend			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	71	59	No
12:15:00 AM	70	59	No
12:30:00 AM	70	59	No
12:45:00 AM	71	59	No
1:00:00 AM	70	59	No
1:15:00 AM	71	59	No
1:30:00 AM	70	59	No
1:45:00 AM	70	59	No
2:00:00 AM	68	59	No
2:15:00 AM	70	59	No
2:30:00 AM	68	59	No
2:45:00 AM	68	59	No
3:00:00 AM	69	59	No
3:15:00 AM	70	59	No
3:30:00 AM	70	59	No
3:45:00 AM	70	59	No
4:00:00 AM	70	59	No
4:15:00 AM	70	59	No
4:30:00 AM	79	59	No
4:45:00 AM	89	59	No
5:00:00 AM	77	59	No
5:15:00 AM	71	59	No
5:30:00 AM	69	59	No
5:45:00 AM	69	59	No
6:00:00 AM	70	59	No
6:15:00 AM	70	59	No
6:30:00 AM	70	59	No
6:45:00 AM	74	59	No
7:00:00 AM	75	59	No
7:15:00 AM	74	59	No
7:30:00 AM	72	59	No
7:45:00 AM	69	59	No
8:00:00 AM	70	59	No
8:15:00 AM	69	59	No
8:30:00 AM	70	59	No
8:45:00 AM	69	59	No
9:00:00 AM	69	59	No
9:15:00 AM	69	59	No
9:30:00 AM	70	59	No
9:45:00 AM	70	59	No
10:00:00 AM	69	59	No
10:15:00 AM	69	59	No
10:30:00 AM	70	59	No
10:45:00 AM	70	59	No
11:00:00 AM	70	59	No
11:15:00 AM	71	59	No
11:30:00 AM	72	59	No
11:45:00 AM	66	59	No
12:00:00 PM	68	59	No
12:15:00 PM	65	59	No
12:30:00 PM	64	59	No
12:45:00 PM	64	59	No
1:00:00 PM	68	59	No
1:15:00 PM	69	59	No
1:30:00 PM	76	59	No
1:45:00 PM	67	59	No
2:00:00 PM	65	59	No
2:15:00 PM	65	59	No

RD15 Elevated Receivers -Weekend		59	
Time	Leq15 Threshold	59	Exceedance (Yes/No)
2:30:00 PM	65	59	No
2:45:00 PM	74	59	No
3:00:00 PM	65	59	No
3:15:00 PM	66	59	No
3:30:00 PM	69	59	No
3:45:00 PM	68	59	No
4:00:00 PM	69	59	No
4:15:00 PM	70	59	No
4:30:00 PM	70	59	No
4:45:00 PM	70	59	No
5:00:00 PM	74	59	No
5:15:00 PM	69	59	No
5:30:00 PM	70	59	No
5:45:00 PM	70	59	No
6:00:00 PM	69	59	No
6:15:00 PM	69	59	No
6:30:00 PM	69	59	No
6:45:00 PM	70	59	No
7:00:00 PM	71	59	No
7:15:00 PM	71	59	No
7:30:00 PM	73	59	No
7:45:00 PM	76	59	No
8:00:00 PM	72	59	No
8:15:00 PM	78	59	No
8:30:00 PM	71	59	No
8:45:00 PM	71	59	No
9:00:00 PM	71	59	No
9:15:00 PM	72	59	No
9:30:00 PM	71	59	No
9:45:00 PM	71	59	No
10:00:00 PM	71	59	No
10:15:00 PM	71	59	No
10:30:00 PM	71	59	No
10:45:00 PM	72	59	No
11:00:00 PM	71	59	No
11:15:00 PM	72	59	No
11:30:00 PM	74	59	No
11:45:00 PM	71	59	No

RD16 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	71	57	No
12:15:00 AM	72	57	No
12:30:00 AM	68	57	No
12:45:00 AM	70	57	No
1:00:00 AM	69	57	No
1:15:00 AM	65	57	No
1:30:00 AM	66	57	No
1:45:00 AM	66	57	No
2:00:00 AM	72	57	No
2:15:00 AM	69	57	No
2:30:00 AM	71	57	No
2:45:00 AM	62	57	No
3:00:00 AM	70	57	No
3:15:00 AM	63	57	No
3:30:00 AM	62	57	No
3:45:00 AM	70	57	No
4:00:00 AM	64	57	No
4:15:00 AM	67	57	No
4:30:00 AM	67	57	No
4:45:00 AM	68	57	No
5:00:00 AM	71	57	No
5:15:00 AM	72	57	No
5:30:00 AM	73	57	No
5:45:00 AM	71	57	No
6:00:00 AM	74	57	No
6:15:00 AM	76	57	No
6:30:00 AM	78	57	No
6:45:00 AM	75	57	No
7:00:00 AM	76	57	No
7:15:00 AM	81	57	No
7:30:00 AM	76	57	No
7:45:00 AM	76	57	No
8:00:00 AM	77	57	No
8:15:00 AM	75	57	No
8:30:00 AM	74	57	No
8:45:00 AM	80	57	No
9:00:00 AM	76	57	No
9:15:00 AM	79	57	No
9:30:00 AM	76	57	No
9:45:00 AM	75	57	No
10:00:00 AM	77	57	No
10:15:00 AM	75	57	No
10:30:00 AM	75	57	No
10:45:00 AM	75	57	No
11:00:00 AM	76	57	No
11:15:00 AM	76	57	No
11:30:00 AM	75	57	No
11:45:00 AM	76	57	No
12:00:00 PM	76	57	No
12:15:00 PM	76	57	No
12:30:00 PM	76	57	No
12:45:00 PM	77	57	No
1:00:00 PM	76	57	No
1:15:00 PM	76	57	No
1:30:00 PM	74	57	No
1:45:00 PM	77	57	No
2:00:00 PM	74	57	No
2:15:00 PM	75	57	No

RD16 Weekdays			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:30:00 PM	74	57	No
2:45:00 PM	75	57	No
3:00:00 PM	78	57	No
3:15:00 PM	75	57	No
3:30:00 PM	75	57	No
3:45:00 PM	75	57	No
4:00:00 PM	77	57	No
4:15:00 PM	76	57	No
4:30:00 PM	74	57	No
4:45:00 PM	76	57	No
5:00:00 PM	74	57	No
5:15:00 PM	76	57	No
5:30:00 PM	76	57	No
5:45:00 PM	76	57	No
6:00:00 PM	77	57	No
6:15:00 PM	75	57	No
6:30:00 PM	83	57	No
6:45:00 PM	78	57	No
7:00:00 PM	75	57	No
7:15:00 PM	74	57	No
7:30:00 PM	76	57	No
7:45:00 PM	77	57	No
8:00:00 PM	84	57	No
8:15:00 PM	75	57	No
8:30:00 PM	76	57	No
8:45:00 PM	76	57	No
9:00:00 PM	75	57	No
9:15:00 PM	75	57	No
9:30:00 PM	75	57	No
9:45:00 PM	80	57	No
10:00:00 PM	74	57	No
10:15:00 PM	75	57	No
10:30:00 PM	76	57	No
10:45:00 PM	74	57	No
11:00:00 PM	71	57	No
11:15:00 PM	73	57	No
11:30:00 PM	70	57	No
11:45:00 PM	76	57	No

RD16 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
12:00:00 AM	70	57	No
12:15:00 AM	73	57	No
12:30:00 AM	73	57	No
12:45:00 AM	71	57	No
1:00:00 AM	68	57	No
1:15:00 AM	69	57	No
1:30:00 AM	77	57	No
1:45:00 AM	67	57	No
2:00:00 AM	74	57	No
2:15:00 AM	80	57	No
2:30:00 AM	72	57	No
2:45:00 AM	72	57	No
3:00:00 AM	77	57	No
3:15:00 AM	77	57	No
3:30:00 AM	73	57	No
3:45:00 AM	68	57	No
4:00:00 AM	75	57	No
4:15:00 AM	71	57	No
4:30:00 AM	72	57	No
4:45:00 AM	72	57	No
5:00:00 AM	62	57	No
5:15:00 AM	64	57	No
5:30:00 AM	66	57	No
5:45:00 AM	68	57	No
6:00:00 AM	64	57	No
6:15:00 AM	74	57	No
6:30:00 AM	68	57	No
6:45:00 AM	69	57	No
7:00:00 AM	68	57	No
7:15:00 AM	69	57	No
7:30:00 AM	70	57	No
7:45:00 AM	69	57	No
8:00:00 AM	73	57	No
8:15:00 AM	69	57	No
8:30:00 AM	72	57	No
8:45:00 AM	71	57	No
9:00:00 AM	71	57	No
9:15:00 AM	71	57	No
9:30:00 AM	72	57	No
9:45:00 AM	73	57	No
10:00:00 AM	73	57	No
10:15:00 AM	75	57	No
10:30:00 AM	74	57	No
10:45:00 AM	75	57	No
11:00:00 AM	71	57	No
11:15:00 AM	71	57	No
11:30:00 AM	72	57	No
11:45:00 AM	74	57	No
12:00:00 PM	74	57	No
12:15:00 PM	72	57	No
12:30:00 PM	73	57	No
12:45:00 PM	75	57	No
1:00:00 PM	74	57	No
1:15:00 PM	74	57	No
1:30:00 PM	74	57	No
1:45:00 PM	74	57	No
2:00:00 PM	75	57	No

RD16 Weekends			
Time	Leq15 Threshold	Predicted	Exceedance (Yes/No)
2:15:00 PM	74	57	No
2:30:00 PM	73	57	No
2:45:00 PM	72	57	No
3:00:00 PM	74	57	No
3:15:00 PM	73	57	No
3:30:00 PM	72	57	No
3:45:00 PM	72	57	No
4:00:00 PM	75	57	No
4:15:00 PM	75	57	No
4:30:00 PM	73	57	No
4:45:00 PM	74	57	No
5:00:00 PM	73	57	No
5:15:00 PM	74	57	No
5:30:00 PM	73	57	No
5:45:00 PM	73	57	No
6:00:00 PM	71	57	No
6:15:00 PM	73	57	No
6:30:00 PM	72	57	No
6:45:00 PM	75	57	No
7:00:00 PM	74	57	No
7:15:00 PM	74	57	No
7:30:00 PM	75	57	No
7:45:00 PM	74	57	No
8:00:00 PM	74	57	No
8:15:00 PM	75	57	No
8:30:00 PM	75	57	No
8:45:00 PM	76	57	No
9:00:00 PM	75	57	No
9:15:00 PM	76	57	No
9:30:00 PM	75	57	No
9:45:00 PM	75	57	No
10:00:00 PM	77	57	No
10:15:00 PM	76	57	No
10:30:00 PM	73	57	No
10:45:00 PM	75	57	No
11:00:00 PM	73	57	No
11:15:00 PM	75	57	No
11:30:00 PM	72	57	No
11:45:00 PM	73	57	No

Attachment 2

Cut and Cover Option

Item No.	Description	Item Bid Estimate
METRO BEVERLY HILLS NORTH PORTAL - CUT & COVER OPTION		\$ 52,602,000
1	EXCAVATION AND SUPPORT	\$ 25,975,000
2	STATION - PERMANENT STRUCTURE	\$ 22,716,000
3	TUNNEL - PERMANENT STRUCTURE	\$ 3,384,000
5	SITE RESTORATION	\$ 527,000
CIVIL WORKS		\$ 5,500,000
6	UTILITY RELOCATIONS	\$ 3,000,000
7	TRAFFIC DIVERSIONS	\$ 2,500,000
TEMPORARY WORKS		\$ 2,250,000
8	GEOTECHNICAL INSTRUMENTATION AND MONITORING	\$ 250,000
9	DEWATERING	\$ 2,000,000
MEP		\$ 2,200,000
10	PLUMBING, FIRE PROTECTION, ELECTRICAL, VENTILATION, AND ELEVATOR EQUIPMENT ROOM	\$ 2,200,000
ARCHITECTURAL FINISHES		\$ 4,250,000
11	ESCALATORS	\$ 1,300,000
12	ELEVATORS	\$ 900,000
13	FARE GATES	\$ 400,000
14	SIGNAGE	\$ 150,000
15	ARCHITECTURAL FINISH WORK	\$ 1,500,000
16	PUBLIC ARTWORK	\$ -
PLAZA CONSTRUCTION		\$ 1,800,000
17	PLAZA AND STREET RESTORATION	\$ 700,000
18	CANOPY	\$ 1,100,000
BASE BID ESTIMATE		\$ 68,602,000
19	MOBILIZATION/DEMobilIZATION @5%	\$ 3,431,000
20	BOND & INSURANCE @1%	\$ 721,000
21	CONTINGENCY @40%	\$ 29,102,000
UNOFFICIAL TOTAL BID ESTIMATE (2023 \$)		\$ 101,856,000
22	ESCALATION (4% YEARLY, UNTIL 2025)	\$ 8,312,000
UNOFFICIAL TOTAL BID ESTIMATE (2025 \$)		\$ 110,168,000
OTHER PROJECT RELATED ESTIMATED COSTS		\$ 24,061,440
23	FINAL DESIGN	\$ 9,000,000
24	DESIGN SUPPORT DURING CONSTRUCTION	\$ 5,000,000
25	CONSTRUCTION MANAGEMENT (8% OF CONSTRUCTION COSTS)	\$ 8,813,440
26	CLIENT COSTS (3 FTEs FOR 4 YEARS @ \$200/HR)	\$ 1,248,000
TOTAL PROJECT RELATED ESTIMATED COSTS		\$ 134,229,440

Attachment 3

North Portal Project – Expended Cost Summary

The costs below are rounded to the nearest thousand.

City of Beverly Hills

Description	Approximate Costs
City Staff	\$ 142,000
Environmental Impact Report (EIR) services	\$ 919,000
Design services	\$ 1,390,000
Other (economic analysis, outreach, etc.)	\$ 180,000
Total	\$ 2,631,000

LA Metro

Description	Approximate Costs
Metro Staff	\$ 53,000
Consultant Support for Interface Only	\$ 196,000
Change Final Design of Interface	\$ 1,000,000
Change for Construction of Interface	\$ 6,490,000
Total	\$ 7,739,000

Total approximate expenditures to date: \$10,370,000.

Board Report 2024-0521

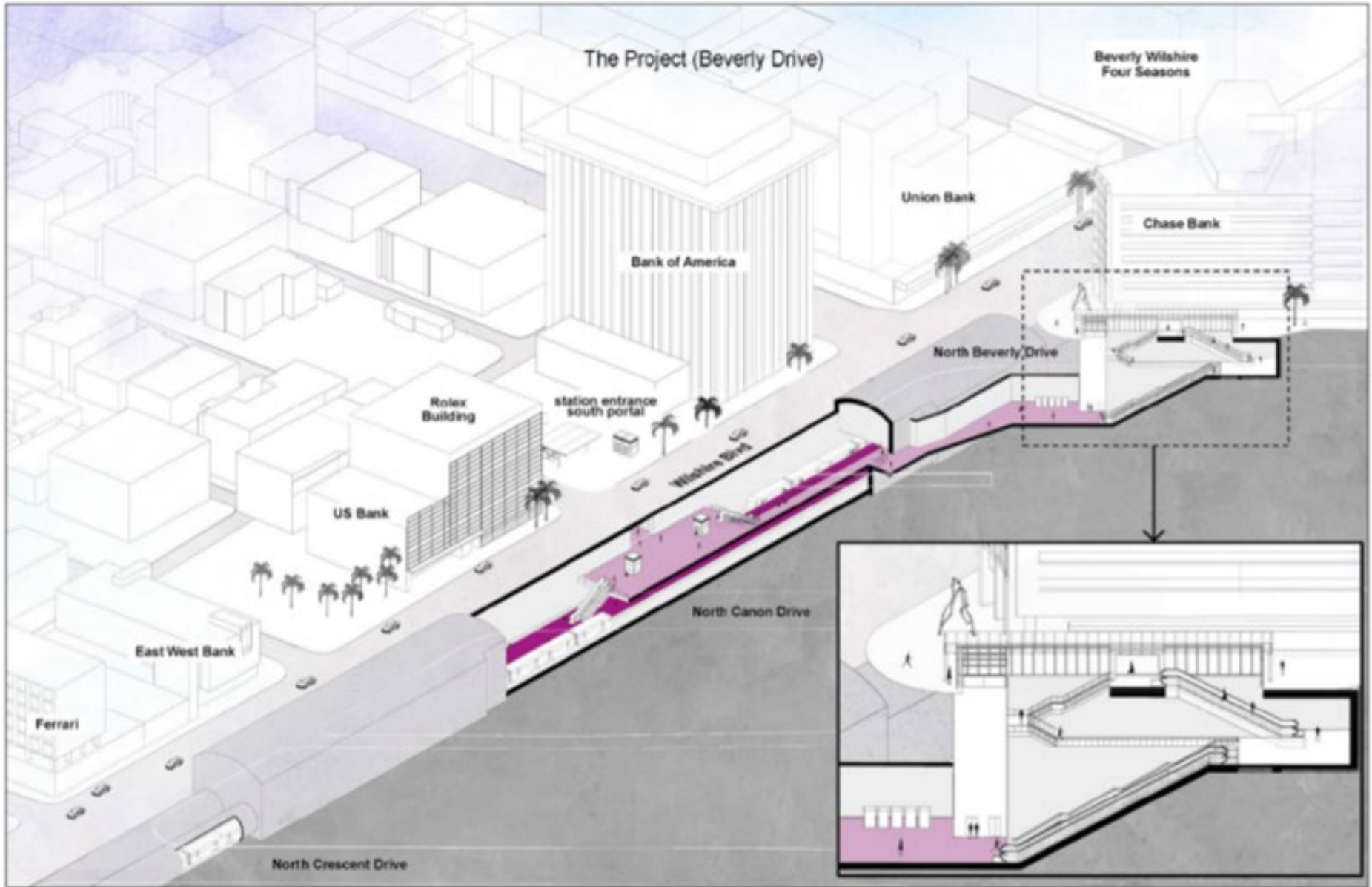
January 2025

**Discontinue Beverly Hills North Portal
Project**

North Portal Project Requirements from Purple Line Section 2 Settlement Agreement

- Not to exceed total of \$78,500,000 – Split 50/50 by between Metro and City
- Metro to design and construct inside the Station Box
 - Provide infrastructure to accommodate the North Portal Project
 - Provide a new cantilevered walkway connecting concourse to North Portal Project
- Metro to support City's design and construct outside the Station Box
 - Provide design support to City
 - Provide construction coordination with both City and Metro Contractors

DISCONTINUE BEVERLY HILLS NORTH PORTAL PROJECT



City of Beverly Hills Recent Actions

- **March 2023**
 - HDR completes 15% design
 - HDR revises total project cost to \$134,200,000
 - Revised cost exceeds Not to Exceed Agreement of \$78,000,000
- **May 2024**
 - Beverly Hills City Council votes to discontinue the North Portal Project

Conclusion

- Board Considerations
 - **Recommended** – Discontinue the North Portal Project
 - **Not Recommended** – Advance the North Portal Project (Requires more funding)
- Next steps for Project Staff
 - Reconcile expenses from each Party per terms of Settlement Agreement
 - Close out the Beverly Hills North Portal Project



Board Report

File #: 2024-1091, **File Type:** Oral Report / Presentation

Agenda Number: 14.

**CONSTRUCTION COMMITTEE
JANUARY 15, 2025**

SUBJECT: CALTRANS QUARTERLY CONSTRUCTION PROJECTS UPDATE

ACTION: RECEIVE ORAL REPORT

RECOMMENDATION

RECEIVE the quarterly oral report on the status of the Caltrans construction projects.

ISSUE

Caltrans is a Metro funding partner and the lead agency on a few highway projects that are under construction in Los Angeles County. These projects include, but are not limited to, safety, mobility and operational improvements on freeways and state highways that are Measure M-funded.

At the request of Directors Horvath and Hahn, this report includes an update on the status of the Pacific Coast Highway Safety Enhancement Project and the I-105 at Studebaker Safety Enhancement Project, respectively.

EQUITY PLATFORM

Projects administered by Caltrans have federal aid and Disadvantaged Business Enterprise (DBE) commitment goals based on the contract bid amount for federal aid projects.

The I-405 Crenshaw Auxiliary Lane Project’s DBE goal of 14% has been achieved. The I-405 Crenshaw Auxiliary Lane Project has been open to traffic for some time, only plant establishment construction activities remain.

The SR-71 South Segment Project did not have federal participation, so a DBE goal was not required, however, the Contractor achieved 0.45% in DBE participation. The SR-71 South Segment Project is under construction and expected to be completed and open to traffic by October 2025.

The Pacific Coast Highway (PCH) Safety Enhancement Project and the I-105 at Studebaker Safety Enhancement Project were emergency contracts administered by Caltrans to address unsafe conditions. The proposed safety and operational improvements for PCH Safety Enhancement Project are intended to reduce speeds and collision rates along the corridor, enhance safety through increased surveillance, and provide better and safer access for those who choose to walk, roll, cycle

or drive.

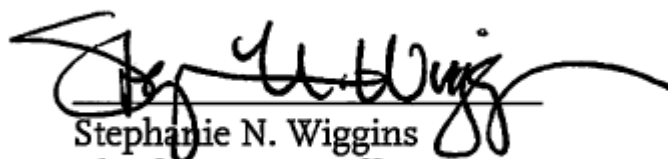
The I-105 at Studebaker Safety Enhancement Project in Norwalk is located within equity focused communities and the SR71 South Segment Project is in Pomona which is reported to be a disadvantaged community. Both cities have communities that stand to benefit from the proposed improvements that address operational deficiencies and unsafe conditions.

As the lead agency, Caltrans is responsible for all the project development phases including procurement, environmental process, outreach, final design, and construction. Caltrans, in coordination with the local jurisdictions, determined community engagement processes specific to the type of transportation improvement. This coordination is aligned with the Caltrans Race & Equity Action Plan to address systemic racial inequities that exist within the transportation sector.

Throughout the construction phase for the projects noted, outreach efforts consisted of sending press releases to cities, communities, elected officials, and multiple media outlets (talk radio, cable news) and social media platforms (X/Twitter, Instagram) that cover Los Angeles and Ventura Counties. Specific notices regarding construction work and/or detours were made available in multiple languages (English, Spanish, Chinese, etc.) based on the affected communities. In addition, Caltrans uses fixed and portable changeable message signs to report lane, ramp and/or local road closures; and QuikMap, a digital application, to provide real-time traffic information (including road closures) for motorists traversing to and through project areas impacted by construction activities. Caltrans also provides updates that are posted on the Caltrans and Metro websites about active construction sites. Every effort is made to avoid, minimize, and/or mitigate construction impacts to communities by providing advance notices to the public when there are freeway and/or ramp lane closures for construction work and/or planned detours. Any unintended equity impacts that may arise will be responded to on a case-by-case basis by the appropriate project partners.

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Stephanie N. Wiggins
Chief Executive Officer









Caltrans Projects Status Report

January 2025

Construction Committee
Los Angeles County Metropolitan Transportation Authority



Project Budget & Schedule Status Summary Chart

		Cost Performance		Schedule Performance		
Project	DBE Goal	Variance Approved LOP	Variance Revised Budget	Variance Original	Variance Revised Schedule	Comments
1. SR-71 South Segment	N/A					Contract progress: 70% complete. Working with Contractor for schedule recovery along with resolving outstanding claims. RW131 soil nail wall construction is completed. NB-71 outside lanes open to traffic. Rio Rancho on-ramp to NB-71 is realigned and opened to traffic. Contractor currently working in Stage 2 median drainage crossover and grading for paving concrete roadway. Currently structure work on SW221A and RW138.
2. I-405 Crenshaw Aux Lane	14%					Contract progress: 97% complete. Contractor is working on planting throughout the project and is in plant establishment



Metro

January 2025 Construction Committee

Los Angeles County Metropolitan Transportation Authority



On target





Possible problem (5-10% variance)





Significant Impact (over 10% variance)



SR-71 South Segment

BUDGET	FA	Approved LOP*	Previous Period	Current Forecast
	\$124.1M	\$124.1M	\$124.1M	\$124.1M
Variance from Approved LOP:			\$0 (0%)	\$0 (0%) 
Variance from Revised Budget:				\$0 

SCHEDULE	Original	Approved Rebaseline	Previous Period	Current Forecast
	Spring 2024	N/A	Spring 2024	Summer 2025*
Variance from Original:			0 WD (0%)	248 WD (26%)* 
Variance from Revised Schedule:				N/A 

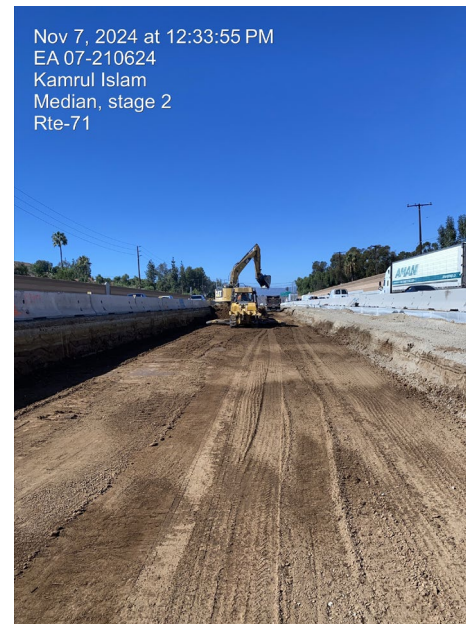
*Pending from time extension approval based on claim resolution

SR-71 South Segment

- Contract progress: 70% complete.
- RW 131 soil nail retaining wall is completed.
- Drainage System (DS) 16-1 Reinforced Concrete Box (RCB) is completed. Currently backfilling and removing shoring system.
- NB 71 outside lanes and Rio Rancho on-ramp is complete and opened to traffic on September 22, 2024. (Stage 1)
- Currently in Stage 2 median work. Lateral drainage tie-ins, roadway excavation and grading underway. Concurrently, SB-71 Stage 3 grading and base had started at the north end of work limits.
- Contractor is still preparing claim backup documentation. Once received, Department will verify and resolve all current potential claims on the project.



NB-71, completed stage 1 roadway.



Stage 2 Median, roadway excavation and grading.





Metro



Los Angeles County Metropolitan Transportation Authority

January 2025 Construction Committee



I-405 Crenshaw Aux Lane

BUDGET				
	FA	Approved LOP	Previous Period	Current Forecast
	\$62.0M	\$62.0M	\$62.0M	\$62.0M
	Variance from Approved LOP:		\$0 (0%)	\$0 (0%) 
Variance from Revised Budget:			\$0 	

SCHEDULE				
	Original	Approved Rebaseline	Previous Period	Current Forecast
	Spring 2024	N/A	Spring 2024	Summer 2024
	Variance from Original:		0 WD (0%)	65 WD (11.2%) 
Variance from Revised Schedule:			0 WD 	

I-405 Crenshaw Aux Lane

- Contract progress: 97% complete.
- The new northbound Crenshaw Boulevard ramp to southbound I-405 was opened to traffic in May 2024.
- The new northbound Crenshaw Boulevard ramp to northbound I-405 was opened to traffic in June 2024.
- The Contractor started the plant establishment period on July 22, 2024.
- The Contractor has met the DBE goal.
- There are no major issues. The Project will be accepted on May 30, 2025.



North side of Crenshaw Blvd UC (Looking South) showing Crenshaw Blvd improvements/auxiliary lane for new NB loop ramp.



South side of Crenshaw Blvd UC (Looking North) showing Crenshaw Blvd improvements/auxiliary lane for realigned SB on ramp and new NB Crenshaw Blvd to SB 405 on ramp

Pacific Coast Highway (PCH) Safety Enhancement Project*

Project Limit

- State Route 1 from McClure tunnel to LA/Ventura County line

Schedule

- December 2023 to March 2025

Cost

- \$4,255,000

Scope

- Striping improvement
- QWICK KURB for better visibility
- Radar feedback signs
- Pedestrian countdown signals
- Sign Installations

*Caltrans Emergency Contract



PCH Safety Enhancement Project

STRIPING:

- Permanent thermoplastic striping for lane delineation completed.
- Completed thermoplastic pavement markings (installation of crosswalks, speed limit demarcations on the pavement and speed reduction bars).



QWICK KURB:

- All Qwick Kurb installation has been completed per plans. Per request from City of Malibu, some locations were replaced with shorter reflective markers to enhance motorist visibility. All work completed.



Metro

Los Angeles County Metropolitan Transportation Authority

January 2025 Construction Committee



PCH Safety Enhancement Project

RADAR SPEED FEEDBACK SIGNS:

- Temporary radar speed feedback signs installed at 10 locations as of December 2023. The permanent poles are ordered and waiting for delivery.

PEDESTRIAN COUNTDOWN SIGNALS:

- Installation is completed for all 44 signals.

SIGNS:

- Caltrans team is continuously taking inventory of all signs that need to be removed or replaced to improve visibility. The removal and replacement are ongoing.



I-105 at Studebaker Safety Enhancement Project**

Project Limit

- Interstate Route 105 ramp to Studebaker

Schedule

- February 2024 to August 2024
- Contract was completed and accepted on 08/06/2024

Cost

- \$460,000

Scope

- Rumble strips
- Flashing beacon
- LED flashing sign panels
- Reflective back plates

**Caltrans Minor Contract



I-105 Safety Enhancement Project

RUMBLE STRIPS:

- Completed: Installed four sets of Rumble Strips on exit ramp ahead of Studebaker intersection



CROSSWALK MARKINGS:

- Completed: Installed Continental Crosswalk Marking



I-105 Safety Enhancement Project

FLASHING BEACON SIGN:

- Completed: Installed flashing beacons on ground-mounted “END FREEWAY ½ MI” sign

REFLECTIVE BACK PLATES:

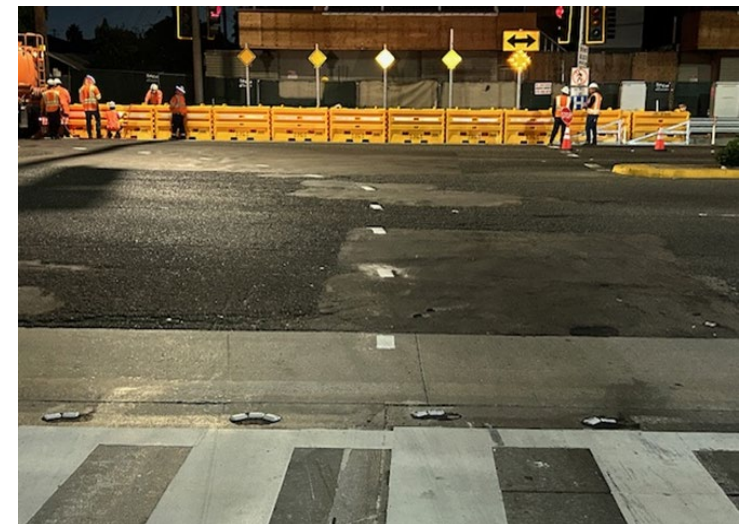
- Completed: Installed reflective backplates on the traffic signal heads at the intersection of I-105 and Studebaker Rd

LED FLASHING SIGN PANELS:

- Completed: Installed LED flashing signs at the intersection of I-105 and Studebaker Rd

Sentry Water-Cable Barrier:

- Completed: Installed two layers of Sentry barriers on October 3, 2024





Board Report

File #: 2024-1116, **File Type:** Oral Report / Presentation

Agenda Number: 15.

**CONSTRUCTION COMMITTEE
JANUARY 15, 2025**

SUBJECT: PROGRAM MANAGEMENT PROJECT STATUS

ACTION: RECEIVE AND FILE

RECOMMENDATION

RECEIVE AND FILE the Program Management Project Status Report.

ISSUE

Program Management’s capital project status report provides significant highlights regarding several capital projects nearing or under construction.

BACKGROUND

Metro’s mission is to provide a world-class transportation system that enhances the quality of life for all who live, work, and play within LA County. Program Management oversees the construction of capital projects. The attached project status report provides significant information about the progress of 12 major capital projects.

DISCUSSION

The project status report includes a summary of 12 major projects including cost and schedule performance, small business project participation status, safety, risk, and equity (Westside Purple Line Sections 1, 2, and 3, Division 20 Portal Widening Turnback, Gold Line Foothill Ext. Phase 2B, Airport Metro Connector, I-5 North County Enhancements, East San Fernando Valley Transit Corridor, North Hollywood to Pasadena BRT Project, G Line BRT Improvements, I-105 Express Lanes Projects, and Southeast Gateway Line). The report highlights construction activities, and safety data is based on the latest available information, consistent with reporting timelines.

EQUITY PLATFORM

The following table summarizes Equity Focus Communities (EFC) percentage data for the individual projects covered in this report. Please see the refreshed equity section baseline in Attachment A for additional information.

Project	Percent in Equity Focus Communities
Airport Metro Connector	100% within or adjacent to Equity Focus Communities.
Gold Line Foothill Ext. Phase 2B	25% (1 of 4 stations) within or adjacent to Equity Focus Communities.
Westside Purple Line Ext 1	This project is not within or adjacent to Equity Focus Communities.
Division 20 Portal Widening Turnback	100% within or adjacent to Equity Focus Communities.
Westside Purple Line Ext 2	This project is not within or adjacent to Equity Focus Communities.
I-5 North County Enhancements	This project is not within or adjacent to Equity Focus Communities.
Westside Purple Line Ext 3	50% (1 of 2 stations) within or adjacent to Equity Focus Communities.
North Hollywood to Pasadena BRT Project	60% within or adjacent to Equity Focus Communities.
G Line BRT Improvements	88% (15 of 17 stations) within or adjacent to Equity Focus Communities.
I-105 Express Lanes	92% within or adjacent to Equity Focus Communities.
East San Fernando Valley Transit Corridor	100% within or adjacent to Equity Focus Communities.
Southeast Gateway Line	65% within or adjacent to Equity Focus Communities.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

Strategic plan goal # 1, Metro will expand transportation options, improve the quality of its transit network and assets, and take steps to manage demands on the entire network.

SAFETY

The average national safety rate is 2.4. Below are the project's recordable injury rates as compared to the national average.

	Project Hours	Recordable Injury Rate	Comments
Airport Metro Connector	1,425,122	1.26	Below National Average
Gold Line Foothill Ext. Phase 2B	2,353,825	0.25	Below National Average
Westside Purple Line Ext 1	10,456,342	0.84	Below National Average
Division 20 Portal Widening Turnback	1,225,860	1.47	Below National Average
Westside Purple Line Ext 2	4,757,014	2.35	Below National Average
I-5 North County Enhancements	853,835	1.41	Below National Average
Westside Purple Line Ext 3 (C1151)	1,817,492	2.42	Above National Average
Westside Purple Line Ext 3 (C1152)	1,881,563	0.64	Below National Average
North Hollywood to Pasadena BRT Project	N/A	N/A	N/A - Construction not started
G Line BRT Improvements	N/A	N/A	N/A - Construction not started
I-105 Express Lanes	N/A	N/A	N/A - Construction not started
East San Fernando Valley Transit Corridor	36,514	0	Advanced Utility Adjustment Construction Only
Southeast Gateway Line	N/A	N/A	N/A - Construction not started

The safety data is based on the latest available information, consistent with reporting timelines.

NEXT STEPS

Staff will continue to work towards the completion of all capital projects. The next Program Management project status report will be provided in April 2025.

ATTACHMENTS

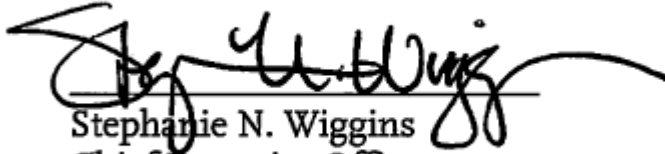
Attachment A - Equity Assessments

Prepared by:

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Stephanie N. Wiggins
Chief Executive Officer

PROGRAM MANAGEMENT EQUITY ASSESSMENTS

Program Management Capital Projects	
Major Projects	
Project Name	Equity Assessment
1 Airport Metro Connector (AMC)	<p>The AMC project is located along the Metro K Line which includes a light rail station, bus plaza, bicycle parking, customer service center, passenger pick-up and drop-off area, and direct connection to the future LAX Automated People Mover (APM). The station will provide an affordable, faster connection to the airport, which lowers travel costs for travelers and employees, including many hospitality workers and other service industry workers near LAX. The rail line goes through neighborhoods with high concentrations of people of color, limited English proficiency households, and low-income households. One hundred percent (100%) of this project is within or adjacent to Equity Focus Communities (EFC) and the station will provide them with direct access to the rest of the Metro rail system.</p>

PROGRAM MANAGEMENT EQUITY ASSESSMENTS

Program Management Capital Projects		
Major Projects		
Project Name	Equity Assessment	
2	West Purple Line Ext. 1 (Metro D Line)	<p>This project extends Purple (D Line) from Koreatown through Miracle Mile, adding three new stations at Wilshire/La Brea, Wilshire/Fairfax and Wilshire/La Cienega. This extension will provide access to jobs, attractions, and hospitals such as Los Angeles County Museum of Arts, Restaurant Row, Beverly Center, and Cedars Sinai Medical Center. The D Line Extension 1 alignment travels through the Wilshire-Koreatown, Pico/Union, Olympic Park, Miracle Mile, Larchmont communities where fifty percent (50%) or more are people of color. In Pico/Union, the percentage of people of color is over seventy percent (70%), and in the Wilshire-Koreatown neighborhood is over ninety percent (90%). These Equity Focus Communities (EFC) neighborhoods will benefit from this project by providing faster travel options to West Los Angeles and improve transit access to jobs along the corridor. Community relations and public outreach events for this project include quarterly virtual stakeholder meetings, door-to-door and weekly email distribution for construction impact notices, information booth at community events, and direct stakeholder field and site visits. Community presentations highlight Metro's Eat Shop Play and Business Interruption Fund construction mitigation programs. The Eat Shop Play program supports local businesses by providing print/digital ads and social media and email marketing. The Business Interruption Fund provides financial assistance to small "mom & pop" businesses directly impacted by the project's construction.</p>

PROGRAM MANAGEMENT EQUITY ASSESSMENTS

Program Management Capital Projects		
Major Projects		
Project Name	Equity Assessment	
3	Gold Line Foothill Ext. Phase 2B (Metro A Line)	This project will extend the Metro A Line 9.1 miles to the east from Glendora to Pomona with connections to the Metro B and D Lines. By increasing transportation options, and decreasing travel times, the population along the project corridor has faster access to attractions, job opportunities, and education within the San Gabriel Valley, Los Angeles County; which before were only accessible by taking several buses. This project allows rail travel to destinations such as La Verne University, Claremont Colleges, Pomona Colleges, Pomona Valley Hospital, Los Angeles County Fairplex, and Raging Waters. Twenty five percent (25%) of the project corridor is within Equity Focus Communities (EFCs) such as Azusa and Pomona with people whom are primarily Black, Indigenous, and other People of Color (BIPOC), have disabilities, and households with low incomes.

PROGRAM MANAGEMENT EQUITY ASSESSMENTS

Program Management Capital Projects	
Major Projects	
Project Name	Equity Assessment
4 Division 20 Portal Widening Turnback	<p>This project will provide enhanced rail service by upgrading Division 20 's rail yard. The Division 20 Portal Widening Turnback Project was designed to reconstruct the key facilities where all revenue service trains for the B and D Lines are dispatched, serviced, and maintained to provide more efficient service. This project includes widening a rail tunnel south of the US-101 Freeway, building a new turnback facility, and readjusting rail storage. The widening of the portal will allow more trains and reduce headways after the expansion of the Purple Line Extension (D Line). This project will have an indirect impact to Equity Focus Communities (EFCs) by speeding up train service for the Metro B and D Lines. (See project numbers 2, 5, and 8 for more information regarding the D Line Extension). The project made a nine-teen percent (19.34%) Small Business Enterprise (SBE) commitment and a three percent (3.31%) Disabled Veteran Business Enterprise (DVBE) commitment to support EFC's within or adjected to this project, primarily supporting neighborhoods along the D Line.</p>

PROGRAM MANAGEMENT EQUITY ASSESSMENTS

Program Management Capital Projects		
Major Projects		
Project Name	Equity Assessment	
5	West Purple Line Ext. 2 (Metro D Line)	<p>This project extends the Metro D Line from Miracle Mile through Beverly Hills and into Century City, adding two new stations at Wilshire/Rodeo and Century City/Constellation. The alignment will allow travelers access to Beverly Shopping Center, Westfield Century City Mall, Museum of Tolerance, and Century City Play House. The project will increase service frequency, reliability and community access to housing, jobs, educational, medical and entertainment needs. This extension of the Purple (D) Line specifically impacts riders of the system from marginalized communities that travel along Metro's B and D Lines. The project will provide access for riders traveling from Equity Focus Communities (EFCs), such as Downtown and Koreatown with neighborhoods with high concentrations of people of color, limited English proficiency households, and low-income households, to resources and amenities within the project area. The Community Relations team produces and distributes construction work notices, which include specific construction location updates, weekly construction work updates, and monthly look ahead notices. They also conduct outreach for community meetings including distribution of digital notices, direct emails, mailed postcards, social media, and paid online and print advertising. The project's invitations for community meetings offer interpretation or translation services upon request, and all public meetings are held in locations that comply with Title IX. The project continues efforts on behalf of Eat Shop Play and Business Interruption Fund in Century City and Beverly Hills.</p>

PROGRAM MANAGEMENT EQUITY ASSESSMENTS

Program Management Capital Projects	
Major Projects	
Project Name	Equity Assessment
6 I-5 North County Enhancements	<p>The project consists of enhancements to the I-5 highway including the addition of a 14 mile High Occupancy Vehicle (HOV)/ carpool lane, extension of the northbound truck lane, additional soundwalls to the truck lane and four other locations, replacement of the Weldon Canyon Bridge, and Intelligent Transportation System (ITS) improvements. These enhancements will augment safety on the freeway by increasing access for merging and offering trucks a separate lane from the general-purpose lanes (GPLs) and are expected to provide a much faster and smoother driving experience in the area for locals and travelers. This project is not within or adjacent to Equity Focus Communities (EFCs). However, this project will have an indirect impact on Equity Focus Communities (EFCs) by providing a better commute experience through the project corridor once complete. The project also made a 13.01% Small Business Enterprise (SBE) commitment to support EFCs within the county.</p>

PROGRAM MANAGEMENT EQUITY ASSESSMENTS

Program Management Capital Projects	
Major Projects	
Project Name	Equity Assessment
7 G Line BRT Improvements	<p>The G-Line BRT Improvements project will upgrade the existing 18-mile bus lane stretching from North Hollywood to Chatsworth in the San Fernando Valley region. Eighty-eight percent (88%) of this project's stations are within or adjacent to Equity Focus Communities (EFCs). Neighborhoods that will benefit from this project are primarily Black, Indigenous, and other People of Color (BIPOC), have disabilities and, lower income households. Upgrades include grade separations on major streets, bike path improvements, better signal priority technology and a four-quadrant gating system. This will provide quicker access to Metro B rail line, Universal Studios, Pierce College, Los Angeles Valley College, and City Walk. The project will allow access to jobs, health care, and education by providing safe and cost-effective improvements to operating speeds, capacity, and safety, while addressing passenger needs and minimizing disruption to San Fernando Valley residents. Community relations and public outreach events for this project include direct field visits, pop-up outreach at G Line stations, bike path and community events, presentations to the Metro Service Council, local area Neighborhood Councils and chambers of commerce, briefings for local elected officials, collateral material distribution, and regular in-person and virtual community update meetings. Community presentations and informational materials are provided in English and Spanish, and bilingual staff and professional language interpreters are available at community meetings.</p>

PROGRAM MANAGEMENT EQUITY ASSESSMENTS

Program Management Capital Projects		
Major Projects		
Project Name	Equity Assessment	
8	West Purple Line Ext. 3 (Metro D Line)	<p>This project will extend the existing D Line by adding 2.56 miles of new rail along with two stations at Westwood/UCLA and Westwood/VA Hospital. Fifty percent (50%) of this project’s stations are within or adjacent to Equity Focus Communities (EFCs). This project goes through areas with high populations of people with disabilities and low-income households. EFCs will benefit from the construction of this project by increasing access to West LA Veteran Administration Campus, UCLA, and UCLA medical center. The project will provide greater operational safety, decrease travel time, improve air quality, and increase access to the corridor, especially for people with low-incomes who work along, but may not live near the corridor and are reliant on public transportation. Community relations and public outreach events for this project are quarterly virtual stakeholder community meetings, door-to-door and weekly email distribution of project construction notices, community open houses, information booths at community events, briefings with LA City Council and administrators for the West VA Medical Center, and direct stakeholder field and site visits. Community presentations highlight Metro’s Eat Shop Play and Business Interruption Fund construction mitigation programs.</p>

PROGRAM MANAGEMENT EQUITY ASSESSMENTS

Program Management Capital Projects	
Major Projects	
Project Name	Equity Assessment
9 North Hollywood to Pasadena BRT Project	<p>North Hollywood to Pasadena BRT project is a 19-mile Bus Rapid Transit corridor with 22 stations. The Project serves as a key regional connection between the San Fernando and San Gabriel Valleys. Providing travelers access points to communities of North Hollywood, Burbank, Glendale, Eagle Rock, and Pasadena for people living along the corridor. Each community has dense residential populations and many cultural, entertainment, shopping, and employment areas throughout, including the NoHo Arts District, Burbank Media District, Glendale Galleria, Americana at Brand, Eagle Rock Plaza, and Old Pasadena. Sixty percent (60%) of this project's stations are within or adjacent to Equity Focus Communities (EFCs). The project goals are to advance transit service, improve accessibility for disadvantaged communities, and enhance connectivity to Metro and other regional transit services. This project will serve as a feeder line, connecting commuters to Metro's B and E Lines, which were previously not accessible before this project. The outreach strategy includes multilingual outreach materials (English, Spanish, Armenian, Tagalog), live-translation during meetings, accessible meeting times and locations, regular updates via a mailing list, and transit-intercept surveys to reach current riders who were otherwise unable to attend meetings. Public hearings also take place where stakeholder questions and concerns are answered. Along with robust stakeholder engagement and focused outreach activities to better engage transit riders and EFCs to inform the planning and project information that will continue during design and construction activities.</p>

PROGRAM MANAGEMENT EQUITY ASSESSMENTS

Program Management Capital Projects		
Major Projects		
Project Name	Equity Assessment	
10	I-105 Express Lanes	<p>Improvements on the I-105 corridor are in the cities of El Segundo, Inglewood, Hawthorne, Los Angeles, Lynwood, South Gate, Paramount, Downey, Norwalk, and portions of unincorporated Los Angeles County. The improvements will convert the existing HOV lane to one or more High-Occupancy Toll (HOT) lanes, referred to as express lanes. This project is broken into 3 segments. Segment 1: I-405 to Central Ave; Segment 2: Central Ave to 1-710; Segment 3: 1-107 to Studebaker Road. Ninety two percent (92%) of this project is within or adjacent to Equity Focus Communities (EFCs). EFCs comprise approximately six miles of the sixteen-mile-long corridor. In the one-mile area around the I-105, about ninety-four percent (94%) of the total population of 536,000 is minority (70.3% Hispanic, 19.6% African American, 3.5% Asian, 0.6% American Indian) based on 2018 data. Of the 142,000 households living in this area, 22% earned below the poverty level (\$25,900 for a family of four) and twenty-six percent (26%) earned less than \$25,000 annually. To ensure low-income households are afforded equitable access to the ExpressLanes and benefits, Metro’s Low Income Assistance Plan and Transit Rewards programs will help lower the costs of opening and maintaining an ExpressLanes account. Outreach to EFCs are conducted through roundtable meetings, partnerships with Community Based Organizations, and pop-up events at various transit locations and community events. The Diversity and Economic Opportunity Department (DEOD) established a twenty-two percent (22%) Disadvantaged Business Enterprise (DBE) commitment.</p>

PROGRAM MANAGEMENT EQUITY ASSESSMENTS

Program Management Capital Projects	
Major Projects	
Project Name	Equity Assessment
11 East San Fernando Valley Transit Corridor	<p>The East San Fernando Valley Light Rail Transit Project is a 6.7 mile along Van Nuys Blvd which includes 11 new stations and a maintenance and storage facility. The project will connect communities of Van Nuys, Panorama City, Arleta, and Pacoima. One hundred percent (100%) of this project's stations are within or adjacent to Equity Focus Communities (EFCs). This project will provide better connectivity to other communities and Van Nuys MetroLink, Metro G Line, employment opportunities, and recreational activities for communities within and adjacent to the project. EFCs consist of neighborhoods with high concentrations of people of color, limited English proficiency households, and low-income households. The communities are engaged and supported during the construction of the project through programs such as the Community Leadership Council (CLC), and partnerships with Community Based Organization (CBO) whom provide information in both English and Spanish. Through Metros construction mitigation programs such Eat Shop Play, Business Interruption Fund, and the Business Solutions Center, we provide support to local, small businesses. The Eat Shop Play program supports local businesses by providing print/digital ads and social media and email marketing. The Business Interruption Fund provides financial assistance to small "mom & pop" businesses directly impacted by the project's construction. The Business Solution Center provides hands-on business assistance and support services to small businesses impacted by the construction of the project. In addition to the programs referenced above, Metro through its contractor SFTC, plans to launch a Cultural Competency Plan. When approved, this plan will focus on three major areas: understanding the local community, local hiring and local contracting opportunities, and finally a</p>

PROGRAM MANAGEMENT EQUITY ASSESSMENTS

Program Management Capital Projects	
Major Projects	
Project Name	Equity Assessment
	careers academy. This is in addition to a nine-teen percent (19.33%) Disadvantaged Business Enterprise (DBE) commitment for Phase 1 (Preconstruction).
12 Southeast Gateway Line	Metro’s plan for better transit includes a new light rail transit (LRT) line to southeast Los Angeles. This project connects Artesia, Cerritos, Bellflower, Paramount, Downey, South Gate, Cudahy, Bell, Huntington Park, Vernon, and unincorporated Florence-Firestone, to downtown Los Angeles. Connecting Metro’s A, C, and Regional Connector rail lines as a feeder line will provide alternatives to driving and create more access to opportunities. This project will include nine new stations and up to five parking facilities allowing access to destinations such as the Grammy Museum, Cerritos Sculpture Garden, and Birmingham Museum of Art. Equity Focus Communities (EFCs) in the area have a population that is sixty-five percent (65%) Black, Indigenous, and other People of Color (BIPOC) of the total study area population, and Hispanic/Latino groups alone account for fifty-one percent (51%) of the study area population. In addition, forty-four percent (44%) of study area residents live below the poverty level, compared with the county average of thirty-three percent (33%). The project will benefit communities through the addition of a new high-quality reliable transit service that will increase mobility and connectivity for the historically underserved communities in the corridor, help to address mobility disparities, and provide residents with increased access to employment, health, and education opportunities.

Program Management Project Status Report

Tim Lindholm

Chief Program Management Officer

Construction Committee

January 2025

Project Budget & Schedule Status Summary Chart

Project	Cost Performance		Schedule Performance		Comments
	Variance Approved LOP	Variance Revised Budget	Variance Original	Variance Revised Schedule	
1. LAX/Metro Transit Center (AMC)					The project is 96% complete. The contractor is making progress on completing electrical and operating systems, interior finishes, electrical and communication room equipment/wiring, elevators and escalators, site finishes, and public ROW (B-Permit) work. Communication systems testing has commenced and will continue to ramp up as devices are installed. Equity: 100% of the project is within or adjacent to Equity Focus Communities.
2. Gold Line Foothill Extension Phase 2B (L-Line)					Project is 93% complete. Construction continues with construction at the Glendora, San Dimas, La Verne and Pomona stations, Southern California Regional Rail Authority (SCRRA) Maintenance of way (MOW) building, Systems Integration Testing and Nighttime Train Testing. Began SCADA Testing. Equity: 25% of the project is within or adjacent to Equity Focus Communities.
3. Westside Purple Line Extension-Section 1 (D-Line)					Project is 95% complete. The Revenue Service Date is Fall 2025. Due to anticipated commitments, the PLE1 contingency has dropped below the 3% Project Reserve threshold. Equity: This Project is not located within or adjacent to Equity Focus Communities.
4. Division 20 Portal Widening Turnback					Project is 79% complete. Construction continues inside the West Portal at the Union East Crossover, North Ladder tracks installation are underway, traction power substations (TPSS) assembly and LFAT complete. Equity: 100% of the project is within or adjacent to Equity Focus Communities.
5. Westside Purple Line Extension-Section 2 (D-Line)					Project is approximately 75% complete. The Project schedule is currently trending behind the target date, which is currently under review to improve schedule performance and recovery options. Equity: This project is not located within or adjacent to Equity Focus Communities.
6. I-5 North County Enhancements					Project is approximately 51% complete. The current construction progress will not allow for an on-time completion. Expected Substantial completion has moved from late Summer 2026 to late Winter 2027. Metro will closely monitor the progress of the work and coordinate with Contractor to mitigate the current delays. Retaining/Sound wall excavation/construction at 10 locations, work on 4 bridges, roadway excavation, lean concrete base (LCB) placement, and drainage/barrier work continues. Equity: This project is not located within or adjacent to Equity Focus Communities.
7. Westside Purple Line Extension-Section 3 (D-Line)					Project is 57% complete. The Project is implementing an accelerated re-sequenced schedule with a revised Revenue Service Date in Summer 2027. Equity: 50% of the project is within or adjacent to Equity Focus Communities.
8. North Hollywood to Pasadena BRT Project*					Design completed to 25% level by planning engineering firm. Program Management Support Service (PMSS) and Architect & Engineering contracts have been approved by Board. The Construction Manager/General Contractor (CM/GC) contract was awarded at December 2024 Board Meeting. Equity: 60% of the project is within or adjacent to Equity Focus Communities.
9. G Line BRT Improvements (G-Line)					Project LOP approved by Board in September 2024. Executed Early Works Package to commence construction on grade separations, station and bike path improvements. Advancing design on gated Intersections alternative including gates at 13 intersections and traffic signal reservicing at remaining crossings. Equity: 88% of the project is within or adjacent to Equity Focus Communities.
10. I-105 Express Lanes*					Design is 80% complete overall. Due to re-design of Segment 1 to reduce the construction cost, Segment 1 design is currently at 95% completion. Seg 1 subcontractor bidding is in process. Segments 2 and 3 Design is at 65% complete. Opinion of Probable Construction Cost (OPCC) based on 65% has been submitted and under evaluation. Equity: 92% of the project is within or adjacent to Equity Focus Communities.
11. East San Fernando Valley Light Rail Transit Project*					FFGA was signed September 6, 2024. Real Estate property acquisitions are underway. Executed Early Work Packages for Design Studies, Initial IPMO, Utility Adjustment UA 6/4, and Final Design. Negotiation continues for Main Project Office and Utility Adjustment UA 2/3 & 7 Early Work Packages. Equity: 100% of the project is within or adjacent to Equity Focus Communities.
12. Southeast Gateway Line (SEGL)*					Submitted the Project Development Phase deliverables and a request for approval to enter the Engineering Phase to the FTA in August 2024 and November 2024, respectively. Key activities include advancing the 60% design for Advanced Utility Relocation (AUR), completing the refinement to the 30% design for freight relocation and the 30% LRT design package, and advancing the 60% design for freight relocation, grade crossings, and I-105 interface works. Equity: 65% of the project is within or adjacent to Equity Focus Communities.



On target



Possible problem
(5-10% variance)



Significant Impact
(over 10% variance)

Small Business Project Status Summary Chart (reflective of payments reported through November 2024)

*Projects without a LOP budget

**Excludes from contract value time delay, claims, settlements, incentives that Contractor contends has no DBE opportunity.

Project	Phase	Goal Type	Contractor Commitment	Current Participation	Status	Variance from Last Reporting +/-	**Adjusted Participation %	% Complete	Comments
1. LAX/Metro Transit Center (AMC)	Construction	SBE	20.79%	18.50%		-.03%		89%	Tutor Perini Corporation (TPC) has a 2.29% SBE shortfall and is exceeding the DVBE commitment by 2.43%. TPC reported a decrease in both SBE and DVBE participation by 0.03% and 0.16%, respectively during this reporting period. TPC has a shortfall mitigation plan on file.
		DVBE	4.96%	7.39%		-.16%			
2. Gold Line/Foothill 2B (L-Line)	Construction	SBE	14.20%	12.42%		--	--	90%	Metro Gold Line Foothill Extension Construction Authority reporting on Kiewit/Parsons JV Construction contract.
3. Westside Purple Line Extension-Section 1 (D-Line)	Design	DBE	20.25%	22.71%		+.50%		96%	Skanska-Traylor-Shea Joint Venture (STS) is exceeding the DBE commitment on both Design and Construction by 2.46% and 0.98%, respectively. STS reported an increase DBE participation on Design of 0.50 and a decrease on Construction of 0.31%, during this reporting period.
	Construction	DBE	17.00%	17.98%		-.31%	20.12%	99%	
4. Division 20 Portal Widening Turnback	Construction	SBE	19.34%	18.31%		+.29%	18.54%	86%	Tutor Perini Corporation (TPC) has a 1.03% SBE and a 0.24% DVBE shortfall. TPC reported a slight uptick in the SBE participation of 0.29% and a slight decrease in DVBE of 0.05%, during this reporting period. TPC has an updated mitigation plan on file and staff will continue to monitor TPC progress towards meeting its commitment.
		DVBE	3.31%	3.07%		-.05%	3.10%		
5. Westside Purple Line Extension-Section 2 (D-Line)	Design	DBE	25.31%	30.24%		+.11%		96%	Tutor Perini/O&G, A Joint Venture (TPOG) is exceeding the DBE commitment on Design by 4.93% and has a 1.30% shortfall on Construction. TPOG reported a slight increase in the DBE participation on Design both Design and Construction by .011% and 0.10%, respectively during this reporting period. TPOG has a shortfall mitigation plan on file. However, Metro requested an updated mitigation plan and forecast with payment breakdown due by December 13, 2024.
	Construction	DBE	17.00%	15.70%		+.10%		75%	
6. I-5 North County Enhancements	Construction	DBE	13.01%	21.74%		+0.79%		35%	OHLA USA, Inc. (OHLA) is currently exceeding its DBE commitment by 8.73%. OHLA reported an increase in their DBE participation by 0.79% during this reporting period.
7. Westside Purple Line Extension-Section 3 – Tunnels (D-Line)	Design	DBE	11.19%	17.30%		N/A		97%	Frontier-Kemper/Tutor Perini JV (FKTP) is exceeding the DBE commitment on both Design and Construction. FKTP reported no change in their DBE participation on design and a slight increase in its DBE participation on construction of 0.14% during this reporting period.
	Construction	DBE	17.10%	21.42%		-.14%	21.50%	88%	
7. Westside Purple Line Extension-Section 3 – Stations, Trackwork, Systems and Testing (D-Line)	Design	DBE	19.25%	16.09%		-.26%		97%	Tutor Perini/O&G, A Joint Venture (TPOG) reported a decrease in its DBE participation on Design of 0.26% and a slight increase on Construction of 1.72% during this reporting period. TPOG has a 3.16% shortfall on Design and 8.79% shortfall on Construction. TPOG submitted an updated shortfall mitigation plan and contends the majority of DBE work will be performed in the 3rd qtr. of 2026 and through substantial completion. As DBE work commences the level of participation will increase accordingly. Staff will continue to monitor TPOG's progress towards meeting its commitments on this project.
	Construction	DBE	21.00%	12.21%		+1.72%		52%	

On target

Possible problem (3-5% shortfall)


Significant Impact (over 5% shortfall)


Small Business Project Status Summary Chart (reflective of payments reported through November 2024)


*Projects without a LOP budget

**Excludes from contract value time delay, claims, settlements, incentives that Contractor contends has no DBE opportunity.



Project	Phase	Goal Type	Contractor Commitment	Current Participation	Status	Variance from Last Reporting +/-	**Adjusted Participation %	% Complete	Comments
8. North Hollywood to Pasadena BRT Project	PMSS	SBE	35.59%	91.38%	OK	+91.38%		7%	Ramos Consulting Services, Inc's (RCS) is exceeding both the SBE and DVBE commitments by 55.79% and 4.72%, respectively.
		DVBE	3.00%	7.72%		+7.72%			
	A&E	SBE	37.69%	TBD	TBD	TBD		TBD	Contract recently awarded; no payments have been reported to date.
		DVBE	3.00%	TBD	TBD	TBD		TBD	
	CM/GC Phase 1	SBE	43.26%	TBD	TBD	TBD		TBD	Contract recently awarded; no payments have been reported to date.
		DVBE	3.49%	TBD	TBD	TBD		TBD	
9. G Line BRT Improv. (PDB Phase 1) (G-Line)	PDB Phase 1	SBE	18.35%	20.82%	OK	+0.75%		94%	Valley Transit Partners (VTP) is exceeding the SBE and DVBE commitments by 2.47% and 0.38%, respectively. VTP reported an increase in both SBE and DVBE participation of 0.75% and 0.09%, respectively during this reporting period.
		DVBE	3.73%	4.11%	OK	+0.09%			
9. G Line BRT Improv. (PDB Phase 2) (G-Line)	PDB Phase 2	SBE	24%	4.63%	OK	+4.39%		39%	Valley Transit Partners (VTP) current level of SBE and DVBE participation is 4.63% and 4.30%, respectively and is cumulatively being counted towards the Phase 2 – Construction commitment. VTP reported an increase in both SBE and DVBE participation of 4.39% and 4.30%, respectively during this reporting period.
		DVBE	3%	4.30%	OK	+4.30%			
10. I-105 Express Lanes*(Phase 1)	CM/GC	DBE	12.40%	12.56%	OK	+1.145%		75%	Flatiron-Myers, A Joint Venture (FMJV) is exceeding the commitment by 0.16%. FMJV reported an uptick in DBE participation by 1.45% during this reporting period.
11. East San Fernando Valley Transit Corridor* (ESFV)	PE/DSDC	SBE	25.29%	23.67%	OK	+0.17%		86%	Gannett Fleming, Inc (GFI) has a shortfall of both the SBE and DVBE commitments of 1.62% and 0.03%, respectively. GFI reported an increase in the SBE participation of 0.17% and a decrease in DVBE of 0.10% during this reporting period. GFI submitted an updated mitigation in December 2023. However, Metro requested an updated mitigation plan due by December 26, 2024.
		DVBE	5.54%	5.51%	OK	-0.10%			
11. ESFV LRT Line Project – Phase 1*	PDB	DBE	19.33%	18.45%	OK	-3.40%		99.8%	San Fernando Transit Constructors' (SFTC) current level of DBE participation is 18.45%, representing a 0.88% shortfall of the commitment. SFTC reported a decrease in DBE participation of 3.40% during this reporting period. SFTC has a mitigation plan submitted on April 11, 2024. However, Metro will request an updated mitigation plan due by December 30, 2024. Staff will continue to monitor SFTC's progress toward meeting the DBE commitment.
11. ESFV – AUA #1*	DBB	DBE	25.32%	22.41%	OK	N/A		95%	W A Rasic Construction Company, Inc.'s (WA Rasic) current level of DBE participation is 22.41%, representing a 2.91% shortfall. WA Rasic reported no change in the DBE participation this reporting period. WA Rasic has a shortfall mitigation plan on file. However, Metro requested an updated mitigation plan due by December 30, 2024. Staff will continue to monitor WA Rasic's progress toward meeting the DBE commitment.
12. Southeast Gateway Line (SEGL)	PMSS	DBE	30.16%	37.31%	OK	+37.31%		2%	WSP USA, Inc. Is exceeding the DBE commitment by 7.15%.

 On target



 Possible problem (3-5% shortfall)

 Significant Impact (over 5% shortfall)

LAX/Metro Transit Center (AMC)

BUDGET				
		Approved LOP*	Previous Period	Current Forecast
		\$898.6M	\$898.6M	\$898.6M
	Variance from Approved LOP:		\$0M (0%)	\$0M (0%) 
	Variance from Revised Budget:			\$0 

* Approved April 2021 Board

SCHEDULE			Revenue Operation	
	Original	Approved Rebaseline	Previous Period	Current Forecast**
	Fall 2024	N/A	Fall 2024	Early 2025***
	Variance from Original:		+0d (0%)	+45d (1.5%) 
	Variance from Revised Schedule:			N/A 

** Current Forecast is based on November 2024 Schedule Update

*** Pre-revenue train testing has begun in November 2024, and system integration testing ongoing.



LAX/Metro Transit Center (AMC)

Safety

Project Hours: 1,425,122 (purely construction hours);
Recordable Injury Rate: 1.26 vs. The National Average: 2.4.

Updates

Overall project progress is 96.3% complete

Primary Station Construction at 95.4% completion

- LADWP has provided permanent power to the AMC station
- K-Line service is operating end-to-end and running through the AMC station.
- Station-wide buildout is progressing at the LRT, Metro Hub, Bike Hub, and Bus Plaza, both interior and exterior.
- Mechanical, electrical, and low voltage installation and testing
- Vertical circulation systems are making progress. Finalizing installation and preparing for state inspections
- Site-wide civil improvements progressing including: landscape & irrigation systems, directional pavers, bollard installation, architectural concrete hardscape, perimeter fence foundations along Arbor Vitae, Photovoltaic (PV) foundations, and shared-use-path sidewalk and landscaping on Aviation Blvd (B-Permit).

Equity



- 100% of the project is located within or adjacent to Equity Focus Communities.



January 2025 Construction Committee



Los Angeles County Metropolitan Transportation Authority

Gold Line Foothill Extension Phase 2B

BUDGET			
	Approved LOP*	Previous Period	Current Forecast**
	\$1,533M	\$1,533M	\$1,533M
	Variance from Approved LOP:	\$0M (0%)	\$0 (0%) 
	Variance from Revised Budget:		\$0 (0%) 

* At time of the award of contract – Board Approval (June 2017)

**Current Forecast does not include funding received from CALSTA SB125

SCHEDULE	Revenue Operation		
	Original *	Approved Rebaseline	Current Forecast**
	January 2025	N/A	Summer 2025
	Variance from Original:		0d (0%) 
	Variance from Revised Schedule:	n/a	n/a 

* The Original date reflects the Authority's Substantial Completion date

** Current Forecast is from the Authority's October 2024 Schedule Update. Authority forecasts Substantial Completion at January 2025, and assumes Revenue Operation will follow 6 months later for the first segment to Pomona.



Gold Line Foothill Extension Phase 2B

Safety

- Project Hours: 2,353,825 (as of October 2024)
- Recordable Injury Rate: 0.25 vs. the National Average: 2.4.

Updates

- **Overall Project Progress is 93% complete**

Construction will continue as follows:

- Sound wall and fencing throughout the project
- Storm Drain inlets and walkway gutter nearing completion
- 4 new stations: Glendora, San Dimas, La Verne, and Pomona
- LRT train control, Overhead Catenary System (OCS) poles and wire installation
- Continue local field acceptance testing for traction power substations (TPSSs)
- Systems integration testing continues
- Begin nighttime active train testing
- Begin preliminary punch list walk with Cities
- Station Parking Lot hardscape work in progress.
- Conducted tour with Gold Line Authority elected officials.

Equity

- 25% of the project is located within or adjacent to Equity-Focus Communities.



Palomares to Pomona - LRV Live Wire Testing



San Dimas – LRV Pull away test





Westside Purple Line Extension – Section 1

BUDGET				
	FFGA	Approved LOP*, **	Previous Period**	Current Forecast**
	\$2,822M	\$2,774M	\$3,354M	\$3,354M
	Variance from Approved LOP:		\$580M (21%)	\$580M (21%) 
	Variance from Revised Budget:			\$0M (0%) 

*At time of the award of contract – Board Approval July 2014.

**Excludes finance costs.

SCHEDULE			Revenue Operation	
	Original	Approved Rebaseline	Previous Period	Current Forecast
	November 2023	Fall 2025	Fall 2025	Fall 2025
	Variance from Original:		+667d (17%)	+667d (17%) 
	Variance from Revised Schedule:			+0d (0%) 



Westside Purple Line Extension – Section 1

Safety

Project Hours: 10,456,342; Recordable Injury Rate: 0.84 vs. the National Average: 2.4.

Updates

- **Overall Project Progress is 95% complete.**
- **Western Station/Interface Chamber:** Interior room build-out and systems work.
- **Wilshire/La Brea Station:** Civil restoration on Wilshire Boulevard. Entrance structure/plaza construction. Interior room buildout, architectural finishes, elevator/escalator work, systems installations and acceptance testing (LFAT).
- **Wilshire/Fairfax Station:** Entrance structure/plaza construction. Civil restoration on Wilshire Boulevard. Interior room buildout, architectural finishes, systems installations, escalator/elevator work and acceptance testing (LFAT).
- **Wilshire/La Cienega Station:** Entrance structure/plaza construction. Permanent utility work. Architectural finishes, interior room build-out, systems installations, elevator/escalator work and acceptance testing (LFAT).
- **Tunneling:** Successfully completed Live Car Train Test (project-wide)
 - **Reach 1:** Continued systems work in tunnels and cross passages.
 - **Reach 2:** Continued systems work in tunnels and cross passages.
 - **Reach 3:** Continued systems work in tunnels and cross passages.
 - **Reach 4:** Continued systems work in tunnels and cross passages.

Equity

- This Project is not located within or adjacent to Equity Focus Communities.





Wilshire/Fairfax Station
Entrance Plaza



Reach 1 Tunnel (Western to La Brea)
Live Car Train Test entering Wilshire/La Brea Station





Division 20 Portal Widening Turnback

BUDGET				
		Approved LOP*	Previous Period**	Current Forecast
		\$801.7 M	\$1,056.5 M	\$1,056.5 M
	Variance from Approved LOP:		\$254.8M (24%)	\$254.8M (0%) 
	Variance from Revised Budget:			\$0M(0%) 

* Original LOP approved at the February 2020 Board meeting for award of contract

** LOP increase approved at October 2024 Board meeting

SCHEDULE			Revenue Operation	
	Original	Approved Rebaseline*	Previous Period	Current Forecast**
	June 2024	Summer 2026	Summer 2026	Summer 2026
	Variance from Original:		+733d (47%)	+733d (47%) 
	Variance from Revised Schedule:			+0 (0%) 

* Rebaseline Schedule April 2024

** Current Forecast is Contractor's recent Schedule Update



Division 20 Portal Widening Turnback

Safety

- Project Hours: Project Hours: 1,225,860
- Recordable Injury Rate: 1.47 vs. The National Average: 2.4.

Construction Updates

- **Overall Project Progress is 79% complete.**
 - **C1136 TPC Portal Widening Turnback Contract**
 - Contract progress is 78%.
 - Traction power substation (TPSS) SCADA testing is complete and energized, Union East crossover dynamic SIT underway, north storage yard devices & terminations underway. In the north ladder track area, third rail & bumping post is being installed as well as train control devices. Paving of service access roads is underway.
 - **C1184 C3M Traction Power Substation Contract**
 - Contract progress is 96%.
 - Substation energized April 2024 and will feed new improvements.
 - **Coordination with Adjacent Projects**
 - Purple Line Extension (PLE1), Regional Connector; Metro Center Project, HR4000 and A650 Vehicle Delivery.

Equity

- 100% of the project is located within or adjacent to Equity Focus Communities.





Center Street Reconstruction



Crossing Panel Installation





Westside Purple Line Extension – Section 2

BUDGET	FFGA	Approved LOP*	Previous Period**	Current Forecast**
	\$2,499M	\$2,441M	\$2,575M	\$2,700M***
	Variance from Approved LOP:		\$134M (5%)	\$259M (11%) 
	Variance from Revised Budget:			\$125M (5%) 

*At time of the award of contract – Board Approval January 2017

**LOP Budget Amendment July 2023. Excludes finance costs.

*** Contractor's delay claims and RFCs are currently under review. The results will be reflected in future updates, subject to Board Approval.

SCHEDULE			Revenue Operation	
	Original	Approved Rebaseline	Previous Period	Current Forecast*
	August 2025	N/A	Summer 2026	Summer 2026
	Variance from Original:		+374d (12%)	+374d (12%) 
Variance from Revised Schedule:			+0d (0%) 	

*The Current Forecast is based on Project Revised Schedule reflecting a target RSD of Summer 2026.



Westside Purple Line Extension – Section 2

Safety

- Project Hours: 4,757,014
- Recordable Injury Rate: 2.35 vs. The National Average: 2.4

Construction Updates-

- **Overall Project Progress: 75% complete.**
- **Century City Station (CCS)**
 - Placement of concrete for concourse level walls in the station box is ongoing. Roof structural concrete is ongoing (94% complete).
 - Station Entrance exterior wall waterproofing and rebar is ongoing.
- **Wilshire/Rodeo Station (WRS)**
 - Traction power substation access shaft walls are ongoing.
 - Installation of roof falsework is ongoing.
- **Tunnels**
 - Tunnel walkway construction has started in BL Tunnel in Reach 4.

Equity

- This Project is not located within or adjacent to Equity Focus Communities.





Century City Station
Backfill Along Avenue of the Stars





Wilshire Rodeo Station
Interior Walls-East Concourse Level Slab



I-5 North County Enhancements

BUDGET				
		Approved LOP*	Previous Period	Current Forecast
		\$679.3M	\$679.3M	\$679.3M
	Variance from Approved LOP:		\$0M (0%)	\$0M (0%) 
	Variance from Revised Budget:		N/A	N/A 

* At time of the award of contract - Board Approval (March 2021)

SCHEDULE			Substantial Completion	
	Original	Approved Re-baseline	Previous Period	Current Forecast
	July 2026	N/A	Summer 2026	Winter 2027**
	Variance from Original:		+0d (0%)	+180d (10%) 
	Variance from Revised Schedule:		N/A	N/A 

** Schedule analysis shows a 283-day delay in substantial completion. Metro disagrees with Contractor's schedule analysis. Working with contractors to mitigate delay and improve the schedule performance.



I-5 North County Enhancements

Safety

Project Hours: 853,835; Recordable Injury Rate: 1.41 vs. The National Average: 2.4.

Updates

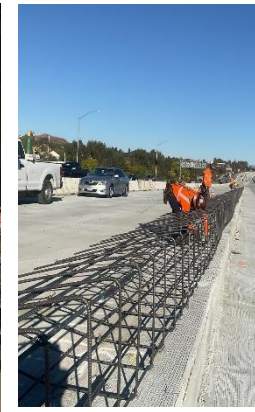
- **Overall Project progress is 51% complete.**
- Construction Stage 1, Phases 1 & 2 continues:
 - Work on 3 bridges throughout the project.
 - Construction of approximately 16 Retaining/Sound Walls on-going throughout the project.
 - On-going work in the median includes barrier and signage installation
 - Lean Concrete Base (LCB) and Jointed Plain Concrete Paving (JPCP) in the median is complete.
- Castaic Creek Bridge substructure is complete.
- Project Team continues to coordinate with various stakeholders.

Equity

- This project is not located within or adjacent to Equity Focus Communities.



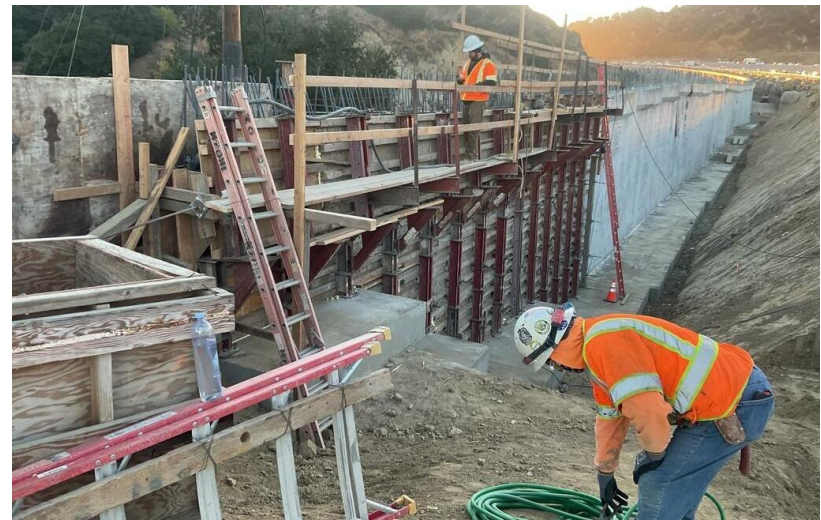
Set Girders at Rye Canyon Bridge



Median Barrier Rebar Installation





Wall 986 Installation of 24IN CIDH Piling



Retaining Wall 2460 Ready for Pour





Westside Purple Line Extension – Section 3

BUDGET	FFGA	Approved LOP*	Previous Period**	Current Forecast**
	\$3,599 M	\$3,224 M	\$3,277 M	\$3,277 M
Variance from Approved LOP:		+\$53M (1.6%)		+\$53M (1.6%) 
Variance from Revised Budget:				\$0 

* At time of the award of contract – Board Approval February 2019

** Excludes finance costs. In June 2023, the Board approved \$53M LOP increase for Concurrent Non-Full Funding Grant Agreement (Non-FFGA) activities.

SCHEDULE			Revenue Operation	
	Original	Approved Rebaseline	Previous Period	Current Forecast*
March 2027	Summer 2027	Summer 2027	Summer 2027	
Variance from Original:		+131d (3.91%)		+131d (3.91%) 
Variance from Revised Schedule:				+0d (0%) 

* Based upon agreed acceleration modification.



Westside Purple Line Extension – Section 3

Safety

Project Hours: 3,699,055 Recordable Injury Rate: 1.46 vs. The National Average: 2.4.

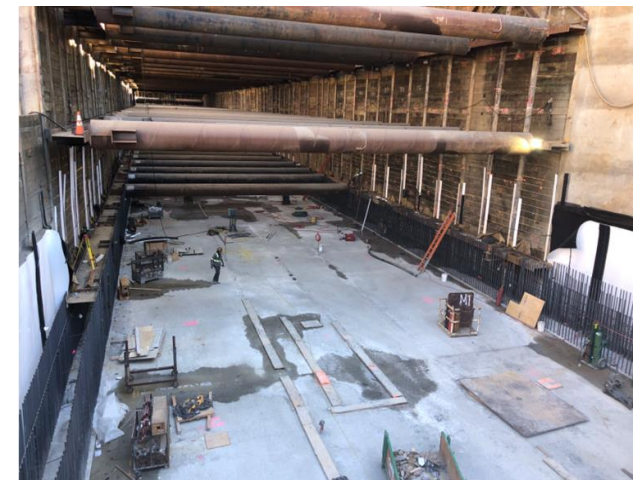
- C1151: Project Hours: 1,817,492; Recordable Injury Rate: 2.42.
- C1152: Project Hours: 1,881,563; Recordable Injury Rate: 0.64.

Updates

- **Overall Project Progress is 57% complete.**
- **Final design progress is 97% complete.**
- **Westwood/UCLA Station**
 - Main station box invert concrete placement was completed.
 - Secondary invert, interior wall and exterior wall concrete placement has begun and is on going.
- **Westwood/VA Hospital Station**
 - Main station box excavation was completed.
 - Station invert concrete placement ongoing (81% complete).
 - The water line connection on Wilshire is 91% complete.
- **Tunnels**
 - Cross passage work in the tunnels continues.
 - Excavation for eight of fourteen cross passages are complete.
- **Equity**
 - 1 of 2 stations (50%) are within or adjacent to Equity Focus Communities.





**Westwood/UCLA Station:
Secondary Invert Concrete Pour (East End)**





**Westwood/VA Hospital Station:
Completed Invert Concrete Pours (Looking West)**



North Hollywood to Pasadena BRT

BUDGET	Approved Budget to Date*			Previous Period	Current Forecast
	Project	N/A		\$308M-515M	\$308-515M
	Variance from Approved LOP:			N/A	N/A 
	Variance from Revised Budget:				N/A 

* Project will work within the annual budget constraints until Life of project (LOP) is established. The goal is to use CM/GC process to reduce forecasted project costs.

SCHEDULE			Revenue Operation	
	Original	Approved Rebaseline	Previous Period	Current Forecast**
	N/A	N/A	Summer 2027	Summer 2027
	Variance from Original:		N/A	N/A 
Variance from Revised Schedule:			N/A 	

** Current Forecast is Metro's Internal Schedule, Baseline schedule is not yet approved at time of update.



North Hollywood to Pasadena BRT

Safety

- Project Construction Hours: 0; Recordable Injury Rate: N/A vs. National Average: 2.4.

Updates

Design is 25% complete.

- Environmental Impact Report (EIR) Approved April 2022
- Program Management Support Service (PMSS) awarded in March 2024
- Architect & Engineering (A&E) contract awarded in May 2024
- CM/GC contract was awarded at the November/December board meeting.

Equity

- 60% of the project is within or adjacent to Equity Focus Communities





Project Map





View of Vineland Ave / Lankershim Blvd



G Line BRT Improvements

BUDGET				
		Approved LOP	Previous Period	Current Forecast
	Project	\$668.45M	\$668.45M	\$668.45M
	Variance from Approved LOP:		\$0M (0%)	\$0M (0%) 
Variance from Revised Budget:			\$0M 	

SCHEDULE			Revenue Operation	
	Original	Approved Rebaseline	Previous Period	Current Forecast
	Winter 2027	N/A	Winter 2027	Winter 2027
	Variance from Original:		+0d (0%)	+0d (0%) 
Variance from Revised Schedule:			N/A 	



G Line BRT Improvements

Safety

Project Construction Hours: 0; Recordable Injury Rate: N/A vs. National Average: 2.4.

Updates

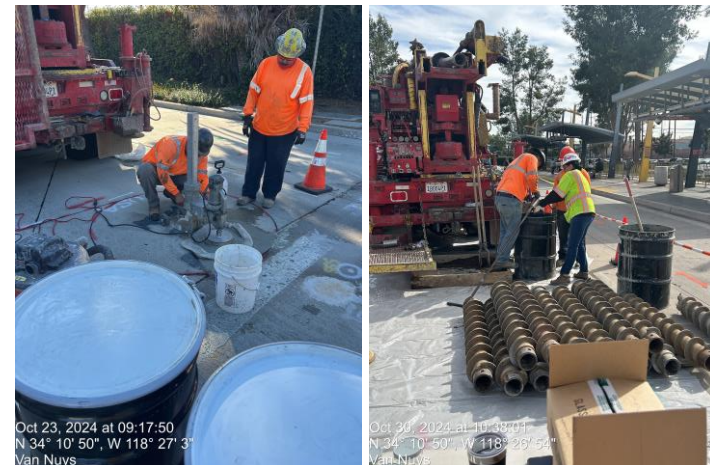
- **Progressive Design Build Contract**
 - The Life of Project (LOP) budget was approved at the September 2024 Board meeting.
 - EWP 4 for the construction of Grade Separations, Station and Bike Path Improvements was executed December 2024.
 - Construction start is scheduled for January 2025.
 - Phase II Environmental Site Assessment is currently underway.
 - The AFC design submittal for Van Nuys is under development. The 100% design submittals for Bike Path improvements and Sepulveda are also underway.
 - Advancing the gated intersections alternative, which includes gates at 13 intersections and traffic signal upgrades at the remaining crossings.
- **Utility Owner-Performed Advanced Utility Relocation (AURs)**
 - Sepulveda – Relocation of communication lines are complete. All necessary underground infrastructure has been installed. LADWP 34.5kv lines remain and are scheduled to be relocated by April 2026
- **Property Acquisitions**
 - Metro has obtained possession of two of three required properties

Equity

- 15 of 17 stations (88%) are within or adjacent to Equity Focus Communities.



Project Map





Phase II Environmental Site Assessment





January 2025 Construction Committee

Los Angeles County Metropolitan Transportation Authority

105 Express Lanes

BUDGET	Approved Budget to Date			Previous Period	Current Forecast
	Pre-Construction	\$119M	\$119M	\$119M	\$119M
	Project	\$757M	\$1.2B - \$1.44B	\$1.4B - \$1.5B	
	Variance from Approved Pre-Construction Budget:		\$0M (0%)	\$0 M (0%)	
	Variance from Approved LOP:		N/A	N/A	
	Variance from Revised Budget:			\$0M	

The Revised Forecast is derived from the ongoing Project estimate, which is in progress following the recent finalization of OPCC for Segment 1 and a more precise estimate for Segments 2 & 3 by CMGC.

SCHEDULE			Revenue Operation	
	Original	Approved Rebaseline	Previous Period	Current Forecast
	N/A	N/A	Spring 2028*	Spring 2028* 
	Variance from Original:		+0d (0%)	+0d (0%) 
	Variance from Revised Schedule:		N/A	N/A

*Note: Spring of 2028 operation is for Segment 1. Segment 2/3 currently is forecasting Spring of 2029



105 Express Lanes

Safety

- Project Construction Hours: 0; Recordable Injury Rate: N/A vs. The National Average: 2.4.

Updates

Design is 80% complete.

Segment 1

- Sub-contractor packages bids were received in July. Final pricing and Segment 1 budget was approved by the Board in October 2024.
- Segment 1 95% plans submitted to Caltrans in September 2024.
- Equity Assessment is in progress; seven roundtable meetings held to date with Community Based Organizations
- Receipt of State's funding allocation of \$150M from California Transportation Commission (CTC) in May 2024. Metro awarded Segment 1 contract in November 2024.

Segment 2 and 3

- Caltrans has concurred with Value Engineering elements. Design team is preparing necessary documents for approval.
- Revised design 95% submittal is anticipated late 2025.
- 65% OPCC update was received with VE elements and is being evaluated.
- Segment 3 design is coordinating with Southeast Gateway Line project

Roadside Toll Collection System (RTCS)

- Started Milestone A-3: Requirements Traceability Matrix Approval
- Draft Roadside System Detailed Design Document submitted for review
- Approval for RTCS Infrastructure Design Document

Equity

- 92% of the project is within or adjacent to Equity Focus Communities.
- Equity assessment in progress that identifies and prioritizes projects that could be funded with future net toll revenue



Traffic on 105 Freeway Eastbound





The Project Map





January 2025 Construction Committee

East San Fernando Valley Transit Corridor

BUDGET	Approved Budget to Date*			Previous Period	Current Forecast
	Pre-Construction	\$879.7M		\$879.7M	\$879.7M
	Project	N/A		\$3.57B	\$3.57B
	Variance from Approved Pre-Construction Budget:			\$0M (0%)	\$0M (0%) 
	Variance from Approved LOP:			N/A	N/A
	Variance from Revised Budget:				\$0M 

*The Board approved an increase to the Pre-Construction Budget in July 2024.

SCHEDULE			Revenue Operation	
	Original	Approved Rebaseline	Previous Period	Current Forecast**
	N/A	N/A	Fall 2031	Fall 2031
	Variance from Original:		+0d (0%)	+0d (0%) 
Variance from Revised Schedule:			N/A 	

**Current schedule forecast reflects Metro's Internal Schedule. The actual Baseline schedule will be negotiated with Progressive Design Builder as part of the Phase 2 Supplement.



East San Fernando Valley Transit Corridor

Safety



C1220 Contract Hours Worked: 36,514; Recordable Injury Rate: 0 vs. National Average: 3.0

Updates



- **FTA Coordination**
 - Full Funding Grant Agreement (FFGA) was executed on 9/13/24
- **Progressive Design-Build Contract**
 - Project negotiating and executing Early Work Packages (EWPs)
 - EWP-01 – Design Studies – \$4.8M - awarded 7/9/24
 - EWP-02 – Initial Integrated Project Mgmt. Office – \$8.8M - awarded 8/7/24
 - EWP-03 – Utility Adjustment Packages 4/6 – awarded 9/5/24
 - EWP-04 – Final Design – \$80M – awarded 9/30/24
 - EWP-05 – Field Office – target Dec. award
 - EWP-06 – Utility Adjustment Packages 2/3/7 - target Dec. award
- **Real Estate**
 - 12 offers issued
 - 8 offers accepted, 5 of which have closed escrow
 - Condemnation process has begun for parcels that did not accept.
- **Construction**
 - SFTC utility construction began in October on EWP-03.
 - DWP self-perform work forecast complete in March.
- **Light Rail Vehicle (LRV) Procurement**
 - LRV Manufacturing Contract to be advertised in early 2025.
- **Equity**
 - 100% of the project is within or adjacent to Equity Focus Communities.



Southeast Gateway Line

BUDGET				
		Approved Budget to Date *	Previous Period	Current Forecast
	Project		\$	\$
	Variance from Approved LOP:		N/A	N/A 
Variance from Revised Budget:			\$0M 	

**The Board has not yet established a Pre-Construction Budget or a Life of Project Budget for the Project.*

SCHEDULE			Revenue Operation	
	Original	Approved Rebaseline	Previous Period	Current Forecast**
	N/A	N/A	Fall 2035	Fall 2035
	Variance from Original:		+0d (0%)	+0d (0%) 
Variance from Revised Schedule:			N/A 	

***Current schedule forecast reflects Metro's Internal Schedule.*



On target



Possible problem
(5-10% variance)



Significant Impact
(over 10% variance)

Southeast Gateway Line

- **Project Development**
 - FTA/PMOC risk workshop completed Nov 5-7, 2024
 - Anticipate initial FTA/PMOC results shared with Metro by mid December
 - Submitted request for approval to enter Engineering on Nov 19, 2024
 - Submitted request to FTA for approval of Letter of No Prejudice (LONP) for the Advanced Works on Nov 20, 2024
- **Advanced Engineering**
 - Continue to advance design for critical elements including utilities, freight, and grade crossings for the CMGC Advanced Works
 - Continue 30% design refinements on LRT elements
 - Continue design coordination with key external stakeholders including UPRR, POLA/POLB, Caltrans, cities, CPUC, and self-performing utility owners
 - 2nd VE workshop scheduled for Q2, 2025
- **Site Investigations**
 - Completed utility potholing
 - Geotechnical investigation work complete except in rivers pending permit from LA County/USACE (defer to next dry season)
 - Environmental sampling completed on San Pedro subdivision w/ report by mid Dec 2024
- **Advanced Works Construction Contract (CM/GC)**
 - Under procurement; award planned for Q1, 2025
- **Equity**
 - 65% of the project is within or adjacent to Equity Focus Communities.





Board Report

File #: 2024-1118, **File Type:** Informational Report

Agenda Number: 16.

CONSTRUCTION COMMITTEE JANUARY 15, 2025

SUBJECT: PROGRAM MANAGEMENT QUARTERLY CHANGE REPORT

ACTION: RECEIVE AND FILE

RECOMMENDATION

RECEIVE AND FILE Status Report on Program Management Quarterly Change Report.

ISSUE

A summary of the use of Board delegated authority to the CEO for contract changes for transit and regional rail construction projects greater than \$500,000 is provided quarterly.

BACKGROUND

In January 2017, the Board approved a one-year pilot to delegate authority to the CEO for execution of project agreements up to the Life-of-Project (LOP) budget for the Crenshaw/LAX, Regional Connector, and Purple Line Extension Section 1 & 2 projects. The purpose of the pilot was to save time and minimize disruption due to the typical contract change administration approval process.

The pilot program was effective, generated cost savings, and avoided costly construction delays. At its January 2018 meeting, the Board approved the continuation and expansion of the delegation of authority within the LOP budget on all Transit and Regional Rail Capital Projects. Staff was directed to provide quarterly reports to the Board on change orders and modifications that are above \$500,000 (Attachment A). Board delegated authority to the CEO for contract modifications is very beneficial to expedite contract changes and avoid costly construction delays. Since inception of the program up to 2,870 concurrent workdays or concurrent 11.1 years, aggregated across the program, have been saved (Attachment B).

DISCUSSION

The change activities for the reporting period between September 1, 2024 - November 30, 2024 are included in Attachment A.

EQUITY PLATFORM

The table below demonstrates the level of benefits to Equity Focus Communities. These Change Orders are necessary to complete each capital project, so each capital project provides full benefits to Equity Focus Communities.

Project	Percent in Equity Focus Communities
Regional Connector	3 of 3 stations (100%) are within or adjacent to Equity Focus Communities
Westside Purple Line Ext 1	This project is not located within or adjacent to Equity Focus Communities
Westside Purple Line Ext 2	This project is not located within or adjacent to Equity Focus Communities
Westside Purple Line Ext 3	1 of 2 stations (50%) are within or adjacent to Equity Focus Communities
Division 20	100% of the project is within or adjacent to Equity Focus Communities
Airport Metro Connector	100% of the project is within or adjacent to Equity Focus Communities
Rail to Rail	90% of the project is within or adjacent to Equity Focus Communities
I-5 North County Enhancements	This project is not located within or adjacent to Equity Focus Communities
I-105 Express Lanes	92% of the project is within or adjacent to Equity Focus Communities
I-605 South Street Interchange Improvements	This project is not located within or adjacent to Equity Focus Communities
North Hollywood to Pasadena	60% of the project is within or adjacent to Equity Focus Communities
East San Fernando Valley Transit Corridor	100% of the project is within or adjacent to Equity Focus Communities

IMPLEMENTATION OF STRATEGIC PLAN GOALS

The recommendation supports strategic plan goal # 5 to provide responsive, accountable, and trustworthy governance within the Metro organization by keeping the Board informed of the Projects’ change orders and modifications via submitting the Change Order log on a quarterly basis.

NEXT STEPS

The next Program Management Quarterly Change Report will cover the period of December 1, 2024, through February 28, 2025, and will be presented to the April 2025 Construction Committee.

ATTACHMENTS

Attachment A - Quarterly Change Orders Log for Reporting Period of September 1, 2024 - November 30, 2024.

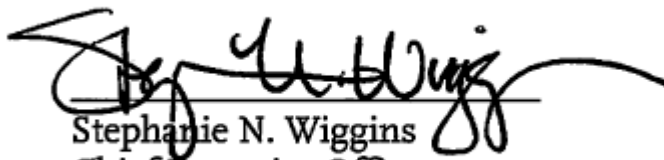
Attachment B - OIG Construction Change Order Spot Checks CEO Delegated Authority Delays Avoided (Through November 2024)

Prepared by:

- **Regional Connector** - Mathew Antonelli, Deputy Chief Program Management Officer, (213) 893-7114
- **Westside Purple Line Ext 1** - James Cohen, Senior Executive Officer, Projects Engineering, (323) 900-2114
- **Westside Purple Line Ext 2** - Zephaniah Varley, Senior Executive Officer, Projects Engineering (interim), (424) 551-4449
- **Westside Purple Line Ext 3** - Kimberly Ong, Senior Executive Officer, Projects Engineering, (424) 551-4501
- **Division 20 Portal** - Albert Soliz, Deputy Executive Officer, Project Management, (213) 922-4002
- **Airport Metro Connector** - Rafie Zamani, Senior Executive Officer, Projects Engineering (interim), (213) 418-3140
- **Rail to Rail** - Rafie Zamani, Senior Executive Officer, Projects Engineering (interim), (213) 418-3140
- **I-5 North Country Enhancements** - Mathew Antonelli, Deputy Chief Program Management Officer, (213) 893-7114
- **I-105 Express Lanes** - James Wei, Executive Officer, Program Management, (213) 922-7258
- **East San Fernando Valley Transit Corridor** - Mathew Antonelli, Deputy Chief Program Management Officer, (213) 893-7114
- **Link Union Station** - Michael McKenna, Deputy Chief Program Management Officer (Interim), (424) 551-4447
- **Report** - Julie Owen, Senior Executive Officer, Program Control, (213) 922-7313

Reviewed by:

Tim Lindholm, Chief Program Management Officer, (213) 922-7297



Stephanie N. Wiggins
Chief Executive Officer

REGIONAL CONNECTOR

I. APPROVED MODIFICATIONS/CHANGES GREATER THAN \$500K IN THIS REPORTING PERIOD (September 1, 2024 - November 30, 2024)

Change Types:
 1 - Betterment 2 - Third Party 3 - Differing Site Conditions 4 - Regulatory Requirements 5 - Scope 6 - Value Engineering 7 - Safety

A. DESIGN BUILD CONTRACT - CONTRACT NO. C0980 - REGIONAL CONNECTOR CONSTRUCTORS

MOD/CHANGE #	DESCRIPTION <small>(if the change is a unilateral, explain in BOLD fonts)</small>	Change Type	Submission Date	Approval Date	Contractor's Proposed Amount	Approved Amount
C0980-MOD-292	Settlement of Changes and Request for Changes: This Contract Modification closes all remaining open Change Notices, Change Orders, and Request For Changes other than RFC 187r2 which will be closed under separate Contract Modification.	5	N/A	10/31/2024	Over \$15M	\$ 10,500,000
C0980-MOD-293	Global Claims Settlement: Resolve all open claims, including RFC 187r2.	5	N/A	10/31/2024	Over \$60M	\$ 55,000,000

B. PROFESSIONAL SERVICES CONTRACTS

MC070-MOD-00030	FY25 Funding for Construction Management Support Services: Provide additional funding for staff augmentation to Metro for construction oversight and closeout support through June 30, 2025.	5	8/30/2024	9/4/2024	\$ 647,079	\$ 647,079
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C. CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONTRACTS

	None					
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II. PENDING MODIFICATIONS/CHANGES GREATER THAN \$500K (September 1, 2024 - November 30, 2024)

A) DESIGN BUILD CONTRACT - CONTRACT NO. C0980 - REGIONAL CONNECTOR CONSTRUCTORS

CHANGE NOTICE/ORDER #	DESCRIPTION	Change Type	Rough Order of Magnitude Cost
	None		

B) PROFESSIONAL SERVICES CONTRACTS

	None		
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C) CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONTRACTS

	None		
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WESTSIDE PURPLE LINE SECTION 1

I. APPROVED MODIFICATIONS/CHANGES GREATER THAN \$500K IN THIS REPORTING PERIOD (September 1, 2024 - November 30, 2024)

Change Types:
 1 - Betterment 2 - Third Party 3 - Differing Site Conditions 4 - Regulatory Requirements 5 - Scope 6 - Value Engineering 7 - Safety

A. DESIGN BUILD CONTRACT - CONTRACT NO. C1045 - SKANSKA-TRAYLOR-SHEA, A JOINT VENTURE

MOD/CHANGE #	DESCRIPTION (if the change is a unilateral, explain in BOLD fonts)	Change Type	Submission Date	Approval Date	Contractor's Proposed Amount	Approved Amount
MOD 232	<u>Wilshire/La Brea Stand-By Generator and Load Bank Procurement</u> : Due to new final design information provided by WPLE2 and WPLE3, WPLE1 has to upgrade its standby generators to a larger size to accommodate the increased generator loads (Emergency Ventilation Fans, Under Platform Exhaust Fans and Station UPS's) at the Wilshire/La Brea Station. This change order is being issued so that the manufacturer can move forward with the procurement and delivery of the generator and the load bank at Wilshire/La Brea Station.	5	11/18/2024	11/18/2024	\$ 2,477,728	\$ 2,324,954

B. PROFESSIONAL SERVICES CONTRACTS

	KKCS/TRIUNITY JV Cost Estimating, Sr. Program Management Analyst, and DBE Contract Compliance Monitoring Services through FY25		9/6/2024	9/6/2024	\$ 1,024,712.39	\$ 1,024,713.00
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C. CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONTRACTS

	None					
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II. PENDING MODIFICATIONS/CHANGES GREATER THAN \$500K (September 1, 2024 - November 30, 2024)

A) DESIGN BUILD CONTRACT - CONTRACT NO. C1045 - SKANSKA-TRAYLOR-SHEA, A JOINT VENTURE

CHANGE NOTICE/ORDER #	DESCRIPTION	Change Type	Rough Order of Magnitude Cost
	None		

B) PROFESSIONAL SERVICES CONTRACTS

	None		
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C) CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONTRACTS

	None		
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WESTSIDE PURPLE LINE SECTION 2

I. APPROVED MODIFICATIONS/CHANGES GREATER THAN \$500K IN THIS REPORTING PERIOD (September 1, 2024 - November 30, 2024)

Change Types:
 1 - Betterment 2 - Third Party 3 - Differing Site Conditions 4 - Regulatory Requirements 5 - Scope 6 - Value Engineering 7 - Safety

A. DESIGN BUILD CONTRACT - CONTRACT NO. C1120 - Tutor Perini / O&G, A Joint Venture

MOD/CHANGE #	DESCRIPTION (if the change is a unilateral, explain in BOLD fonts)	Change Type	Submission Date	Approval Date	Contractor's Proposed Amount	Approved Amount
MOD-00223	<u>Revise Street Restoration in City of Beverly Hills per MOA and Other Project Conditions – Design Only:</u> This Change directs the contractor to revise the street restoration design at Wilshire Rodeo Station to comply with the requirements of the Memorandum of Agreement (MOA) between Metro and the City of Beverly Hills, Federal American with Disabilities Act, and other Project conditions.	2	8/6/2024	9/4/2024	\$ 584,349	\$ 544,852
MOD-00227	<u>CCS 24-inch Storm Drain Line D Connection on Avenue of the Stars-Construction (CO-81):</u> This Change directs the Contractor to proceed with shoring installation and connection to an existing storm drain lateral serving 2000 Avenue of the Stars.	5	9/16/2024	10/21/2024	\$ 1,706,453	\$ 1,670,998
CO-00073.2	<u>Impacts Arising from Secondary Lining Installation in Reach 5 Tunnels:</u> The Contractor has separately, via CN-244, been directed to design a secondary liner within the Special Lining Section of Tunnel Reach 5 to meet the Project's additional Lining Performance Criteria. This direction resulted in impacts to material procurement and construction logistics associated with the original design of the tunnel lining in the Special Lining Sections. This Change covers these impacts. Note: The Contractors Proposed Amount is \$0 as this change order is part of a compilation of different changes. The amount was previously reported under CN-000250 in May 2024 reporting indicated Rough Order of Magnitude Cost More than \$15 Million.	5	N/A	10/31/2024	\$ -	\$ 672,000

B. PROFESSIONAL SERVICES CONTRACTS

None						
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C. CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONTRACTS

None						
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II. PENDING MODIFICATIONS/CHANGES GREATER THAN \$500K (September 1, 2024 - November 30, 2024)

A) DESIGN BUILD CONTRACT - CONTRACT NO. C1120 - Tutor Perini / O&G, A Joint Venture

CHANGE NOTICE/ORDER #	DESCRIPTION	Change Type	Rough Order of Magnitude Cost
CN-00207	<u>Additional Project Management, Administration, and Compliance Activities for Changes Issued During Base Design Services (Claim 58, RFC-00110)</u> : This Change constitutes full compensation for and final resolution of Claim 58 including without limitation, all design work or services, of any nature, rendered or performed from October 1, 2021 to May 31, 2024, including extended design services, and all subcontractor design services and extended design services, from October 1, 2021 to May 31, 2024.	5	Between \$500K and less than \$1M
CN-00226	<u>Additional Project Management, Administration, and Compliance Activities for Changes Issued During Base Design Services (RFC-00104)</u> : This change constitutes full compensation for and final resolution of Claims 23, 29, 31, 33, 41, 42, 46 and 61 including without limitation, all design work or services, of any nature, rendered or performed at any time prior to October 1, 2021, including extended design services, and all subcontractor design services and extended design services, at any time prior to October 1, 2021.	5	Between \$5M and \$10M
CN-00238	<u>Wayside Operating Signage – Design, Fabrication, and Installation</u> : This change includes design, furnish, and install wayside operating signage. Prior to solicitation of the Request for Proposal (RFP) for the C1120 Contract, it was assumed that Metro Operations would fabricate and install certain Wayside Operating Signage (WOS). After Operation's review of the C1120 Contractor's submittal for WOS, Metro Operations confirmed insufficient resources to perform the portion of the work assigned to them, and that it should be transferred to the C1120 Contractor.	5	Between \$500K and less than \$1M
CN-00277	<u>MOA New Streetscape Standards in City of Beverly Hills - Design Only</u> : This Change directs the contractor to revise the design of the Wilshire Rodeo Station (WRS) sidewalk pattern, street equipment and furniture to incorporate new City of Beverly Hills (COBH) Streetscape Design Standards to comply with the requirements of the Memorandum of Agreement (MOA) between Metro and the City of Beverly Hills. This scope of work will include construction related items.	2	Between \$1M and \$5M
CN-00279	<u>MOA Impacts to Work Activities during 2024 Holiday Moratorium</u> : The purpose of this Change is to compensate the C1120 Contractor for impacts to the Wilshire/Rodeo station construction activities from work restrictions imposed by the City of Beverly Hills (COBH) Memorandum of Agreement (MOA) during the following period: a. November 28, 2024, through January 1, 2025. This Change excludes individual COBH holidays defined in the MOA which were not already part of the C1120 Contract. Those individual additional COBH holidays will be captured separately in a subsequent Change.	2	Between \$500K and less than \$1M

B) PROFESSIONAL SERVICES CONTRACTS

TBD	Engineering Support Services	5	More than \$15M
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C) CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONTRACTS

	None		
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WESTSIDE PURPLE LINE SECTION 3

I. APPROVED MODIFICATIONS/CHANGES GREATER THAN \$500K IN THIS REPORTING PERIOD (September 1, 2024 - November 30, 2024)

Change Types:
 1 - Betterment 2 - Third Party 3 - Differing Site Conditions 4 - Regulatory Requirements 5 - Scope 6 - Value Engineering 7 - Safety

A. DESIGN BUILD CONTRACT - CONTRACT NO. C1151 (FKTP)						
MOD/CHANGE #	DESCRIPTION (if the change is a unilateral, explain in BOLD fonts)	Change Type	Submission Date	Approval Date	Contractor's Proposed Amount	Approved Amount
C1151-CO-00014	Special Secondary Tunnel Lining in Reach 6 BR Tunnel Stationing 738+70.17 to 731+62.01 and BL Tunnel Stationing 738+92.08 to 731+92.79 – CONSTRUCTION ONLY - This Change directs the Contractor to construct a special secondary liner within the Special Lining Section of Tunnel Reach 6 to meet additional Lining Performance Criteria. The Change Order was necessary to keep the Work moving while negotiations for a bilateral Modification continue.	5	9/17/2024	10/25/2024	\$ 57,764,399	\$ 4,736,727

A. DESIGN BUILD CONTRACT - CONTRACT NO. C1152 (TPOG)						
C1152-MOD-00135	UCLA Sta - Ground Improvement - During Final Design of PLE3 (Purple Line Extension 3), it was identified that foundation excavation for adjacent Wilshire Gayley building is planned to take place concurrently with the Westwood/UCLA station excavation. This Change strengthens the strip of soil ((ground improvement) that is approximately 9 ft wide separating the two excavations, improving soil stability during excavations.	5	10/9/2024	10/24/2024	\$ 1,817,583	\$ 1,817,583
C1152-CO-00129	Special Secondary Tunnel Lining in Reach 6 BR Tunnel Stationing 738+70.17 to 731+62.01 and BL Tunnel Stationing 738+92.08 to 731+92.79 – CONSTRUCTION ONLY - This Change directs the Contractor to revise the construction for the tunnel fit out to accommodate the C1151 design change for the special secondary liner within the Special Lining Section of Tunnel Reach 6 to meet additional Lining Performance Criteria. The Change Order was necessary to keep the Work moving while negotiations for a bilateral Modification continue.	5	9/27/2024	11/21/2024	\$ 11,441,925	\$ 1,050,000

B. PROFESSIONAL SERVICES CONTRACTS						
PS77530000-TO-003-MOD-00002	WPLE3- Environmental Resource Monitoring - Continuation of environmental field monitoring compliance services, as required by the VA Hospital and UCLA access agreements, though 04/30/2026.	5	10/24/2024	10/29/2024	\$ 1,266,503	\$ 1,266,503
PS54007-TO-008-MOD-00005	Metro Quality Management Consultant (QMC) Services for WPLE 3 Project - FY2025 Support - Continuation of Quality Management services to supplement Metro's Quality Management Department and to provide technical expertise in resolving complex issues through 07/31/25.	5	9/13/2024	9/17/2024	\$ 909,733	\$ 909,733

C. CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONTRACTS						
	None					

II. PENDING MODIFICATIONS/CHANGES GREATER THAN \$500K (September 1, 2024 - November 30, 2024)

A. DESIGN BUILD CONTRACT - CONTRACT NO. C1151 (FKTP)

CHANGE NOTICE/ORDER #	DESCRIPTION	Change Type	Rough Order of Magnitude Cost
	None		

A. DESIGN BUILD CONTRACT - CONTRACT NO. C1152 (TPOG)

	None		
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B) PROFESSIONAL SERVICES CONTRACTS

	None		
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C) CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONTRACTS

	None		
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DIVISION 20 PORTAL WIDENING TURNBACK

I. APPROVED MODIFICATIONS/CHANGES GREATER THAN \$500K IN THIS REPORTING PERIOD (September 1, 2024 - November 30, 2024)

Change Types:
 1 - Betterment 2 - Third Party 3 - Differing Site Conditions 4 - Regulatory Requirements 5 - Scope 6 - Value Engineering 7 - Safety

A. DESIGN BUILD CONTRACT - CONTRACT NO. 1136 (TUTOR PERINI CORP)							
MOD/CHANGE #	DESCRIPTION (if the change is a unilateral, explain in BOLD fonts)	Change Type	Submission Date	Approval Date	Contractor's Proposed Amount	Approved Amount	
	None						
B. PROFESSIONAL SERVICES CONTRACTS							
	None						
C. CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONTRACTS							
	None						

II. PENDING MODIFICATIONS/CHANGES GREATER THAN \$500K (September 1, 2024 - November 30, 2024)

A) DESIGN BUILD CONTRACT - CONTRACT NO. 1136 (TUTOR PERINI CORP)

CHANGE NOTICE/ORDER #	DESCRIPTION	Change Type	Rough Order of Magnitude Cost
CO-00294	Schedule B Increase: This change order authorizes work items and quantities to be added to the contract value based on unit prices from the Schedule of Quantities & Prices – Schedule B. This includes soil excavation, treatment and disposal of hazardous groundwater above base contact levels, potholing, asbestos piping, and Metro directed fencing and gate installation.	5	Between \$1M and \$5M

B) PROFESSIONAL SERVICES CONTRACTS

None			
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C) CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONTRACTS

None			
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AIRPORT METRO CONNECTOR

I. APPROVED MODIFICATIONS/CHANGES GREATER THAN \$500K IN THIS REPORTING PERIOD (September 1, 2024 - November 30, 2024)

Change Types:
 1 - Betterment 2 - Third Party 3 - Differing Site Conditions 4 - Regulatory Requirements 5 - Scope 6 - Value Engineering 7 - Safety

A. DESIGN BID BUILD CONTRACT - CONTRACT NO. C1197 - Tutor

MOD/CHANGE #	DESCRIPTION (if the change is a unilateral, explain in BOLD fonts)	Change Type	Submission Date	Approval Date	Contractor's Proposed Amount	Approved Amount
Tutor - C1197 Mod 43 CO 10.1 CN 57	<p>Flaggers for Arbor Vitae Crossing Mod 43 reduces CO 10.1 from 2,995,000 to final negotiated price of 2,605,516.</p> <p>Los Angeles World Airports (LAWA) is currently widening Arbor Vitae Street as part of their Landside Access Modernization Program (LAMP). As a result, the signal and gate equipment at the existing at-grade crossing will need to be removed and replaced to accommodate the wider street. This involves deactivation of the current street crossing equipment. While the street is under construction, pedestrian access will be maintained, and Metro will continue to use Arbor Vitae crossing to move trains between Southwest Yard and the K-line. To mitigate potential safety risks and prevent interruptions to Metro Operations, flaggers must be utilized to ensure the safe passage of trains through the deactivated crossing. The flaggers would also maintain the safety of pedestrians and other construction personnel when walking across the tracks.</p> <p>Flagging cost incurred by the AMC project, as a result of LAWAs construction efforts on Arbor Vitae Street, will be reimbursed by LAWA</p>	5	8/1/2024	8/20/2024	\$ 2,631,871	\$ 2,605,516
Tutor - C1197 Mod 44 CN 36	Bulletin 40 - Roof Drain and Light Gage Framing	5	9/13/2024	10/9/2024	\$ 1,375,884	\$ 1,358,138
Tutor - C1197 Mod 45 CN 71	LRT Excessive Deflections	5	10/1/2024	10/23/2024	\$ 841,430	\$ 833,373
Tutor - C1197 Mod 46 CN 32	Bulletin 41 - Additional Security Cameras	5	10/2/2024	10/18/2024	\$ 948,104	\$ 939,256
Tutor - C1197 Mod 47 CN 48.1	Additional Bus Charging Stations	5	10/10/2024	11/9/2024	\$ 5,136,669	\$ 5,073,300
Tutor - C1197 Mod 48 CO 15 CN 58	Bulletin 62 and 62A - Arbor Vitae Fence Updates	5	10/23/2024	11/4/2024	\$ 826,439	\$ 812,572
Tutor - C1197 Mod 49 CO 13 CN 33	<p>Bulletin 29C - Arbor Vitae Fence Updates</p> <p>Final negotiated price for work started under CO 13. Authorizes Not to Exceed amountof \$1,000,000 to allow work decribed in base Change Notice (CN) 33 to proceed pending finalization of the Contract Modification. CO 13 does NOT supersede CN 33.</p>	5	10/30/2024	11/12/2024	\$ 1,349,528	\$ 1,134,517

B. PROFESSIONAL SERVICES CONTRACTS

None						
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C. CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONTRACTS

None						
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II. PENDING MODIFICATIONS/CHANGES GREATER THAN \$500K (September 1, 2024 - November 30, 2024)

A) DESIGN BID BUILD CONTRACT - CONTRACT NO. C1197 - Tutor

CHANGE NOTICE/ORDER #	DESCRIPTION	Change Type	Rough Order of Magnitude Cost
Tutor - C1197 Mod 50 CN 50	<p>Bulletin 43 - Added Roof Hatches and MESH Ceiling Hatches</p> <p>The Contractor shall provide the necessary labor, equipment, and materials to perform work in accordance with the Contract Documents and Bulletin 43.</p> <p>Bulletin 43 also modifies the architectural and structural drawings to allow better coverage and safer access for maintenance personnel to the roof of the AMC station. The adjustments and additions, such as the installation of railings, fall restraint systems, and ladders, will aim to improve the safety for personnel accessing the roof level.</p>	5	Between \$1M and \$5M
Tutor - C1197 Mod 51 CN 59	<p>Bulletin 54 - Telecom Radio Station Changes</p> <ul style="list-style-type: none"> - Identify existing available telecom and electrical pathways to be used for the radio system. - Identify final locations for the installation of radio equipment – telecom cabinets, radio equipment, and radio antennae to ensure existing structure can support added loads. - Verify power requirements for all equipment to ensure existing electrical system can support the added loads for the radio system. 	5	Between \$1M and \$5M

B) PROFESSIONAL SERVICES CONTRACTS

None			
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C) CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONTRACTS

None			
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RAIL TO RAIL

I. APPROVED MODIFICATIONS/CHANGES GREATER THAN \$500K IN THIS REPORTING PERIOD (September 1, 2024 - November 30, 2024)

Change Types:

1 - Betterment 2 - Third Party 3 - Differing Site Conditions 4 - Regulatory Requirements 5 - Scope 6 - Value Engineering 7 - Safety

A. DESIGN BUILD CONTRACT - CONTRACT NO. C1166 Rail to Rail (Griffith)							
MOD/CHANGE #	DESCRIPTION <small>(if the change is a unilateral, explain in BOLD fonts)</small>	Change Type	Submission Date	Approval Date	Contractor's Proposed Amount	Approved Amount	
None							
B. PROFESSIONAL SERVICES CONTRACTS							
None							
C. CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONTRACTS							
None							

II. PENDING MODIFICATIONS/CHANGES GREATER THAN \$500K (September 1, 2024 - November 30, 2024)

A) DESIGN BUILD CONTRACT - CONTRACT NO. C1166 - Rail to Rail (Griffith)

CHANGE NOTICE/ORDER #	DESCRIPTION	Change Type	Rough Order of Magnitude Cost
C1166 Mod tbd CO 30 CN	<p>Mod TBD (CO-30) Temp Traffic Signals and Street Lights (Various Bulletins)</p> <p>The scope of this change addresses the difference between the labor, equipment, and materials the contractor originally anticipated for the temporary traffic signal and temporary street lighting work at public right-of-way intersections based on the example case plans provided, and the actual plans provided to the contractor after bid, during construction. This change does not pertain to traffic control plans as it is the understanding with the Contractor that there is a no cost change with traffic control plans.</p> <p>At the time of bid, the design for the Volume 5 traffic control plans was not completed for all the intersections. The designer assigned cases to the different intersections. However, when the approved traffic control plans were issued, there was difference between the cases and what was issued. The contractor is seeking costs for this change in plans, specifically for the temporary traffic signal (TTS) plans and the temporary street lighting (TSL) plans. This change is not for the traffic control (TC) plans. The contractor has indicated there will be no cost for the traffic control plans.</p>	5 and 7	Between \$1M and \$5M
C1166 Mod tbd CN 125	<p>Design Bulletin (DBul) 125-SSLE Bollards Installation</p> <p>Contractor to provide labor, equipment, and material (except actual bollards that were procured separately) to install both removable and non-removable bollards as shown on C1166-DBul-00125-SSLE Bollards along the Metro Right of Way of Rail to Rail project.</p>	5 and 7	Between \$500K and less than \$1M

B) PROFESSIONAL SERVICES CONTRACTS

None			
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C) CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONTRACTS

None			
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I-105 EXPRESS LANES

I. APPROVED MODIFICATIONS/CHANGES GREATER THAN \$500K IN THIS REPORTING PERIOD (September 1, 2024 - November 30, 2024)

Change Types:
 1 - Betterment 2 - Third Party 3 - Differing Site Conditions 4 - Regulatory Requirements 5 - Scope 6 - Value Engineering 7 - Safety

A. CMGC CONTRACT - CONTRACT NO. PS84667000

MOD/CHANGE #	DESCRIPTION (if the change is a unilateral, explain in BOLD fonts)	Change Type	Submission Date	Approval Date	Contractor's Proposed Amount	Approved Amount
003	Modification for the Identified Early Works Package for Segment 1, Construction	5		11/15/2024	\$ 389,126,962	\$ 389,126,962

B. PROFESSIONAL SERVICES CONTRACTS (WSP Design Contract), Segment 1, Contract # AE275020011497-TO8)

5	Additional design that includes updating the 100% design to avoid the newly discovered landfills near Normandie Avenue.	5		8/30/2024	\$ 1,908,075	\$ 1,908,075
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C. CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONTRACTS

	None					
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II. PENDING MODIFICATIONS/CHANGES GREATER THAN \$500K (September 1, 2024 - November 30, 2024)

A. CMGC CONTRACT - CONTRACT NO. PS84667000

CHANGE NOTICE/ORDER #	DESCRIPTION	Change Type	Rough Order of Magnitude Cost
	None		

B) PROFESSIONAL SERVICES CONTRACTS (WSP Design Contract), Segment 1, Contract # AE275020011497-TO8)

	None		
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C) CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONTRACTS

	None		
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I-5 NORTH COUNTY ENHANCEMENTS PROJECT

I. APPROVED MODIFICATIONS/CHANGES GREATER THAN \$500K IN THIS REPORTING PERIOD (September 1, 2024 - November 30, 2024)

Change Types:
 1 - Betterment 2 - Third Party 3 - Differing Site Conditions 4 - Regulatory Requirements 5 - Scope 6 - Value Engineering 7 - Safety

A. DESIGN BID BUILD CONTRACT - CONTRACT NO. C70396C1205 - OHL USA, INC.							
MOD/CHANGE #	DESCRIPTION (if the change is a unilateral, explain in BOLD fonts)	Change Type	Submission Date	Approval Date	Contractor's Proposed Amount	Approved Amount	
	None						
B. PROFESSIONAL SERVICES CONTRACTS							
	None						
C. CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONTRACTS - CONTRACT NO. PS67828000 - HILL INTERNATIONAL							
MOD 2	PS67828000 Project Title: I-5 N HOV and Truck lane	5	9/27/2024	9/30/2024	\$ 33,228,106	\$	33,228,106

II. PENDING MODIFICATIONS/CHANGES GREATER THAN \$500K (September 1, 2024 - November 30, 2024)

A) DESIGN BID BUILD CONTRACT - CONTRACT NO. C70396C1205 - OHL USA, INC.

CHANGE NOTICE/ORDER #	DESCRIPTION	Change Type	Rough Order of Magnitude Cost
CO 33	Wildlife Fencing Enhancements	5	Between \$500K and less than \$1M
MOD 45	Quantity Increase: 840656 - PAINT TRAFFIC STRIPE (2-COAT)	5	Between \$500K and less than \$1M

B) PROFESSIONAL SERVICES CONTRACTS - CONTRACT NO. AE469080015383 - JACOBS ENGINEERING

MOD 17	POP Extension through July 31, 2027	5	Between \$1M and \$5M
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C) CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONTRACTS

	None		
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EAST SAN FERNANDO VALLEY

I. APPROVED MODIFICATIONS/CHANGES GREATER THAN \$500K IN THIS REPORTING PERIOD (September 1, 2024 - November 30, 2024)

Change Types:
 1 - Betterment 2 - Third Party 3 - Differing Site Conditions 4 - Regulatory Requirements 5 - Scope 6 - Value Engineering 7 - Safety

A. PROGRESSIVE DESIGN BUILD CONTRACT - CONTRACT NO. PS89616 SAN FERNANDO TRANSIT CONSTRUCTORS

MOD/CHANGE #	DESCRIPTION (if the change is a unilateral, explain in BOLD fonts)	Change Type	Submission Date	Approval Date	Contractor's Proposed Amount	Approved Amount
PS89616000-MOD-00006	Design Potholing. This contract modification is for the Contractor to complete utility investigations to support the final design of Early Works Package (EWP) 04. The scope encompasses all investigation that is needed to complete the final design of utility relocation for the entire project corridor. Work includes coordination and management of subconsultant activities. Field work will include advanced saw cutting and jackhammering activities, implementation of traffic control, excavation, field surveying, noise monitoring, and post-excavation pavement restoration.	5 - Scope	11/7/2024	11/20/2024	\$ 4,034,495	\$ 3,034,495

B. PROFESSIONAL SERVICES CONTRACTS - CONTRACT NO. AE58083E0129 - GANNETT FLEMING, INC.

AE58083E0129-MOD00051	<u>Design Services During Construction (DSDC) for the Advance Utility Adjustments (UA) Packages.</u> Consultant shall provide technical Design Services During Construction (DSDC) of the Utility Adjustments (UA), to be constructed by DWP-PS and San Fernando Transit Constructors (SFTC). Tasks to be performed included review and respond to RFI's from both the Contractor and Third Parties; review and comment on submittals made by the Contractor and Third Parties; review, respond and comment on Nonconformances as necessary; attend construction, field or third-party meetings as requested; attend quality meetings as requested; coordinate with 3rd parties as necessary; make minor design adjustments to plan and/or profile sheets as necessary; and update base files as needed.	5 - Scope	06/20/24	7/1/2024	\$ 691,200.00	\$ 637,162.00
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C. CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONTRACTS

	None					
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II. PENDING MODIFICATIONS/CHANGES GREATER THAN \$500K (September 1, 2024 - November 30, 2024)

A) PROGRESSIVE DESIGN BUILD CONTRACT - CONTRACT NO. PS89616 SAN FERNANDO TRANSIT CONSTRUCTORS

CHANGE NOTICE/ORDER #	DESCRIPTION	Change Type	Rough Order of Magnitude Cost
None	None		

B) PROFESSIONAL SERVICES CONTRACTS - CONTRACTS NO. AE35279 - KKCS/TRIUNITY

PS89856000-CWO-013-MOD-00004	FY25 PCSS - DBE Contract Compliance Monitoring, Cost Estimating, Scheduler, PMIS, and Sr. Program Management Analyst. DBE Compliance - Consultant staff shall continue to provide compliance monitoring support from Senior Contract Compliance Officers (Consultants) as required to the Diversity and Economic Opportunity Department through the Program Control Support Services Contract (PCSS) to provide contract compliance monitoring support services consistent with the Department of Transportation (DOT) 49 Code of Federal Regulations (CFR) Part 26 and Metro's Disadvantaged Business Enterprise (DBE) Program and compliance with Metro's SBE Program, and following the attached detailed Scope of Work. Estimating - Metro requires Project Construction Estimating Oversight Services to support the design and construction of the East San Fernando Transit Corridor project through the Progressive Design-Build project delivery method with program management technical support services as follows: Provide on-going Program Management technical support services in accordance with contractual job classifications for a Cost Estimating Manager and/or Sr. Cost Estimator. Continue to provide oversight support and advice on the following topics relative to the selected project delivery method for East San Fernando Valley (ESFV).	5 - Scope	Between \$1M and \$5M
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C) CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONTRACTS

None	None		
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LINK UNION STATION

I. APPROVED MODIFICATIONS/CHANGES GREATER THAN \$500K IN THIS REPORTING PERIOD (September 1, 2024 - November 30, 2024)

Change Types:
 1 - Betterment 2 - Third Party 3 - Differing Site Conditions 4 - Regulatory Requirements 5 - Scope 6 - Value Engineering 7 - Safety

A. DESIGN BUILD CONTRACT - CONTRACT NO.

MOD/CHANGE #	DESCRIPTION (if the change is a unilateral, explain in BOLD fonts)	Change Type	Submission Date	Approval Date	Contractor's Proposed Amount	Approved Amount
	None					

B. PROFESSIONAL SERVICES CONTRACTS

Task Order 1	Link US - Life Storage Building Abatement & Demolition - Contract No. AE79441-004-TO-01 - Abatement and demolition of the Life Storage building, including installation of temporary street lighting	5	08/26/24	9/11/2024	\$ 4,669,681	\$ 4,669,681
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C. CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONTRACTS

	None					
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II. PENDING MODIFICATIONS/CHANGES GREATER THAN \$500K (September 1, 2024 - November 30, 2024)**A) DESIGN BUILD CONTRACT - CONTRACT NO.**

CHANGE NOTICE/ORDER #	DESCRIPTION	Change Type	Rough Order of Magnitude Cost
	None		

B) PROFESSIONAL SERVICES CONTRACTS

CWO16, Mod. 2	Link US - Program Control Support Services (PCSS) - Contract No. PS8985600 - Additional funding to cover difference between ICE and Cost & Schedule Proposal for pending MOD 2	5	Between \$500K and less than \$1M
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C) CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONTRACTS

	None		
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Attachment B - OIG Spot Check CEO Delegated Authority Delays Avoided (through November 2024)

Project Name	Total Work Days Saved	Years Saved
Crenshaw/LAX	336	1.3
Regional Connector	463	1.8
Purple Line Section 1	849	3.3
Purple Line Section 2	536	2.1
Purple Line Section 3	486	1.9
Division 20	200	0.8
Airport Metro Connector	123	0.5
Total Savings	2870	11.1



Board Report

File #: 2024-1075, File Type: Informational Report

Agenda Number: 17.

CONSTRUCTION COMMITTEE JANUARY 15, 2025

SUBJECT: OFFICE OF THE INSPECTOR GENERAL CONSTRUCTION CHANGE ORDER SPOT CHECKS

ACTION: RECEIVE AND FILE

RECOMMENDATION

RECEIVE AND FILE Office of the Inspector General Construction Change Order Spot Check Report for the period September 1 to November 30, 2024.

ISSUE

On January 25, 2018, the Metro Board directed the Office of the Inspector General (“OIG”) to conduct random spot checks on change orders for the construction projects listed in the quarterly program management report to ensure that the CEO Delegation of Authority to approve Construction Change Orders Policy is performing in the manner desired by the Board of Directors.

BACKGROUND

The OIG’s Construction Change Order Spot Check Program (“Spot Checks”) focuses on approved change orders and modifications that exceed \$500,000. The four change orders in this report were selected from the Program Management Quarterly Major Project Status for the period of September 1, 2024 - November 30, 2024. The OIG gathers the data, reviews all the change orders over \$500,000 and selects change orders from the major projects. The information for the Spot Checks was collected from the Program Management Information System (PMIS), which is the department’s database system. Also, virtual meetings and telephonic interviews were conducted with Metro Program Management, Project Control, and Procurement staff from each involved project office.

For each Spot Check, we summarized:

- Description of the change order,
- Change order detail,
- Scope of Work,
- Budget,
- Schedule (Time to execute the change order),
- Safety, and

- Recommendations (lessons learned are identified starting with this report).

Metro's Program Control department has provided informal responses to this report before its issuance and they are asked to provide written responses to the recommendations in this OIG Spot Checks Report within 30 days after this Report is issued. Included with this report is a spreadsheet with the status of responses concerning previous OIG Spot Check Report recommendations (Attachment B).

DISCUSSION

Spot Checks Performed in this Quarter

Spot Check #1 - Airport Metro Connector (AMC) 96th St. Transit Station Project

This OIG Spot Check report concerns the Airport Metro Connector (AMC) 96th St Transit Station Project (Contract C1197 MOD 00045), Excessive Roof Deflection.

Change Order Detail

See Attachment A Spot Check #1 table.

Summary #1

Scope of Work - This change order of \$833,373 is for MOD 00045. It is related to additional work on the skylight roof at the Airport Metro Connector (AMC) 96th Street Transit Station Project. Conditions of excessive roof damage were caused by the increased load on the structural members. This resulted in the deformation of the structural elements and necessitated rework to maintain structural integrity.

Budget - This change order MOD 00045 was negotiated to \$833,373. The Contractor's Proposal (CSP) was \$841,430 and the Independent Cost Estimate (ICE) was \$680,133. The ICE is \$161,297 (19.17%) under the Contractor's Proposal. The negotiated amount is \$153,240 (22.53%) over the ICE. The staff confirmed that funds for this change order are included within the Life-of-Project budget.

Question to Airport Metro Connector Program Management

The OIG requested an explanation for the variation between the Contractor's Proposal and ICE, and the final change order amount. Was this variation anticipated, or did additional factors arise during implementation that justified this increase?

Response from Airport Metro Connector Program Management

The variation between the Contractor's Proposal, ICE, and final Change Amount resulted from additional Request for Information (RFI) details and evolving market and project conditions that increased costs. After negotiations, the increase was accepted by Metro. A cost-benefit analysis weighed corrections against schedule impacts, leading to the most efficient solution. Two in-person negotiation meetings ensured the Contractor's proposal was accurate and aligned with field performance.

Schedule - The CEO Delegation of Authority process was utilized for this change order. The Contractor and Metro agreed on the Scope of Work on October 1, 2024. The modification was awarded on October 23, 2024, and it took staff seventeen workdays to complete all signature approvals, assuming presentation at a January Board meeting date (no December meeting), it would have taken a total of seventy workdays to complete the transaction, under the prior Board approval method for change orders.

Safety - The Airport Metro Connector Transit Station Project has 1,290,644 Project hours through September 2024 with a Total Recordable Injury Rate (TRIR) of 1.4 (the Bureau of Labor Statistics National Average is 2.4) and a Days Away Restricted or Transferred (DART) rate of 0 (the Bureau of Labor Statistics National Average is 1.5).

Recommendations/Lessons Learned-The OIG recommends continuing to perform design constructability, quality, and safety assessments and implementing engineering controls, and monitoring systems to detect technical compliance anomalies early in the project lifecycle.

Spot Check #2 - Purple Line Extension Section 2 Transit Project

This OIG Spot Check report concerns the Purple Line Extension Section 2 (Contract C1120 MOD 00227), Unforeseen Conditions of the Private Sewer Line in the Critical Path.

Change Order Detail

See Attachment A Spot Check #2 table

Summary #2

Scope of Work- This change order of \$1,670,988 is for MOD 00227. It is related to permanent improvements and unforeseen conditions of an unidentified sewer line discovered by the Contractor during the piling operations and striking the live sewer line at 2000 Ave of the Stars. The unknown sewer line was not in the as-built utility drawings, and the Los Angeles Bureau of Engineering (LABOE) was unaware of it.

Question to Purple Line Extension 2 Program Management

The OIG requested an explanation of what exploratory methods were conducted to identify and locate utilities during the design phase?

Response from Purple Line Extension 2 Program Management

Potholing was conducted for some utilities as part of the design process, but not for all utilities. The sewer line in question exceeded the effectiveness of the Ground Penetrating Radar (GPR).

The prime contractor and infrastructure designer did not account for the sewer line in their plans because it was not identified during the exploratory work of the design phase, and there was no indication of the sewer line in the as-built records provided by the Los Angeles Bureau of Engineering (LABOE). The contractor utilized typical utility location methods (i.e., potholing and GPR).

Budget - This change order MOD 00227 was negotiated to \$1,670,998. The Contractor's Proposal was \$1,706,453 and the Independent Cost Estimate (ICE) was \$1,628,401. The ICE is \$78,052 (4.57%) under the Contractor's Proposal. The negotiated amount is \$42,597 (2.62%) over the ICE. The staff stated that funds for this change order are within the recently amended Life-of-Project budget.

Schedule - The CEO Delegation of Authority process was utilized for this change order. The Contractor and Metro agreed on the Scope of Work on October 08, 2024. The modification was awarded on October 21, 2024, and it took staff nine workdays to complete all signature approvals. Under the prior Board approval method for change orders, assuming presentation at a January 2025 Board meeting date (no December meeting), it would have taken a total of sixty workdays to complete the transaction, under the prior Board approval method for change orders.

Safety - The Purple Line Extension 2 Project has 4,757,014 Project hours through October 2024 with a Total Recordable Injury Rate of 2.35 (the Bureau of Labor Statistics National Average is 2.4) and a Days Away Restricted Transferred (DART) rate of .5 (the Bureau of Labor Statistics National Average is 1.5).

Recommendations/Lessons Learned - None

Spot Check #3 - Purple Line Extension Section 1 Transit Project

This OIG Spot Check report concerns the Purple Line Extension Section 1 (Contract C1045 MOD 00231), Wilshire/La Brea Station Plaza Standby Generator and Load Bank Procurement.

Change Order Detail

See Attachment A Spot Check #3 table.

Summary #3

Scope of Work - This change order of \$2,324,954 is for MOD 00231. It is related to permanent improvements and replacement of the existing 2000 kW standby generator with a larger 2750 kW standby generator at the Wilshire/La Brea Station Plaza. The change order incorporates the Contractor's design, procurement of equipment, and necessary construction improvements.

Budget - This change order MOD 00231 was negotiated to \$2,324,954. The Contractor's Proposal was \$2,477,728 and the Independent Cost Estimate (ICE) was \$1,984,603. The ICE is \$493,125 (24.85%) under the Contractor's Proposal. The negotiated amount is \$340,351 (17.15%) over the ICE. The staff stated that funds for this change order are within the Life-of-Project budget.

Schedule - The CEO Delegation of Authority process was utilized for this change order. The Contractor and Metro agreed on the Scope of Work on November 07, 2024. The modification was awarded on November 18, 2024, and it took staff seven workdays to complete all signature approvals. Under the prior Board approval method for change orders, assuming presentation at a January Board meeting date (no December meeting), it would have taken a total of fifty-five

workdays to complete the transaction, under the prior Board approval method for change orders.

Safety - The Purple Line Extension 1 Project has 10,456,342 Project hours through October 2024 with a Total Recordable Injury Rate of .84 (the Bureau of Labor Statistics National Average is 2.4) and a Days Away Restricted Transferred (DART) rate of .10 (the Bureau of Labor Statistics National Average is 1.5).

Recommendation/Lessons Learned - None

Spot Check #4 - Airport Metro Connector (AMC) at the 96th Street Transit Station Project

This OIG Spot Check report concerns the Airport Metro Connector (AMC) 96th Street Transit Station (Contract C1197 MOD 00049), Improvements of the North-end Perimeter Site Fencing.

Change Order Detail

See Attachment A Spot Check #4 table.

Summary #4

Scope of Work - The change order of \$1,134,517 is for MOD 00049 It is related to design changes of the north-end perimeter site fencing along Arbor Vitae Street at the Airport Metro Connector (AMC) 96th Street Transit Station Project. The change order amount includes costs associated with the design, procurement of materials, and construction necessitated by the increased number of bus charging stations and infrastructure improvements made by the Los Angeles Department of Water and Power (LADWP).

Budget - This change order MOD 00049 was negotiated to \$1,134,517. The Contractor's Proposal was \$1,349,528 and the Independent Cost Estimate (ICE) was \$1,166,373. The ICE is \$183,155 (15.70%) under the Contractor's Proposal. The negotiated amount is \$31,856 (2.73%) under the ICE. The staff stated that funds for this change order are within the Life-of-Project budget.

Schedule - The CEO Delegation of Authority process was utilized for this change order. The Contractor and Metro agreed on the Scope of Work on October 30, 2024. The modification was awarded on November 18, 2024, and it took staff twelve workdays to complete all signature approvals. Under the prior Board approval method for change orders, assuming presentation at a January 2025 Board meeting date (no December meeting), it would have taken a total of fifty-one workdays to complete the transaction, under the prior Board approval method for change orders.

Safety - The Airport Metro Connector Transit Station Project has 1,290,644 Project hours through September 2024 with a Total Recordable Injury Rate (TRIR) of 1.4 (the Bureau of Labor Statistics National Average is 2.4) and a Days Away Restricted or Transferred (DART) rate of 0 (the Bureau of Labor Statistics National Average is 1.5).

Recommendations/Lessons Learned - None

FINANCIAL IMPACT

This report will have no financial impact on the Agency beyond what is described above.

Impact to Budget

For all of the construction change orders reviewed, Metro stated the funds are within the approved budget and will utilize the contingency funds to cover the cost from the Life-of-Project-budget.

- Spot Check #1) \$833,373 Airport Metro Connector 96th Street Transit Station Project
- Spot Check #2) \$1,670,988 Purple Line Extension Section 2 Transit Project
- Spot Check #3) \$2,324,954 Purple Line Extension 1 Transit Project
- Spot Check #4) \$1,134,517 Airport Metro Connector 96th Street Transit Station Project

EQUITY PLATFORM

In the opinion of the OIG, we considered whether these change orders presented any equity-related issues on their face. The OIG did not receive any data concerning community impacts. The OIG observed no obvious disparate impacts created by these change orders on small businesses or low-income persons or by the performance of the work in a manner that impacted a disadvantaged community beyond what is typical and usual when conducting any construction.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

The Office of Inspector General reviews large change orders over a calendar quarter and makes recommendations as appropriate to support Metro's Strategic Plan Goal #5: Provide responsive, accountable, and trustworthy governance within the Metro organization and CEO goals to exercise fiscal discipline to ensure financial stability. The OIG mission includes reviewing expenditures for fraud, waste, and abuse in Metro programs, operations, and resources. For each selected change order reviewed, the OIG evaluates whether there are red flags of fraud, waste, or abuse taking place. We report the details of the significant change orders and make recommendations consistent with the OIG's Construction Best Practices report dated February 29, 2016, and supplemental report in 2023 more particularly focusing on safety, lessons learned, improving efficiencies, and prudent spending.

NEXT STEPS

The OIG shall provide every quarter, an ongoing spreadsheet of recommendations to Program Control and Program Management. Program Control and Program Management agrees to respond to the recommendations of the OIG within 30 days. The OIG continues to meet periodically to discuss reports, recommendations, and the status of implementation of the recommendations with Project Management, and receive updates. The list of OIG recommendations and Metro management responses is an attachment to this OIG report (Attachment B).

ATTACHMENTS

Attachment A - Change Order Details for Spot Checks in this report
Attachment B - OIG Recommendations and Responses Tracking Sheet

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Reviewed by: Karen Gorman, Inspector General, (213) 244-7337



Karen Gorman
Inspector General

Spot Check #1 – Airport Metro Connector 96th St. Transit Station Project - Contract C1197

Change Order Detail

<u>Description of Modification or Change Order – MOD 00045</u>	
Excess Roof Deflections	
<u>Change Order Dates:</u>	
Scope of Work approved	October 01, 2024
Unilateral Executed	October 23, 2024
<u>Elapsed Time for Executing Change Order:</u>	
Using new delegated process	17 workdays
Estimate using former Board approval process Agenda for the January Board	70 workdays
<u>Cost of Change Order:</u>	
Metro independent cost estimate (ICE)	\$680,133
Contractor's proposed cost	\$841,430
Negotiated amount	\$833,373
Percentage of negotiated amount <i>over/under</i> ICE	22.53%
Amount less than the Contractor's Stated Proposal (CSP)	\$8,057

Spot Check #2 – Purple Line Extension Section 2 Transit Project - Contract C1120

Change Order Detail

<u>Description of Modification or Change Order – MOD 00227</u>	
Unforeseen Conditions of Private Sewer Line in Critical Path	
<u>Change Order Dates:</u>	
Scope of Work approved	October 08, 2024
Not to Exceed amount issued (NTE)	October 21, 2024
<u>Elapsed Time for Executing Change Order:</u>	
Using new delegated process,	9 workdays
Estimate using former Board approval process Agenda for the January Board	66 workdays
<u>Cost of Change Order:</u>	
Metro Independent Cost Estimate (ICE)	\$1,628,401
Contractor Stated Proposal (CSP)	\$1,706,453
Negotiated Amount	\$1,670,988
Percentage of negotiated amount <i>over/under</i> (ICE)	2.62%
Amount less than the Contractor's Stated Proposal (CSP)	\$35,465

Spot Check #3 – Purple Line Extension Section 1 Transit Project - Contract C1145**Change Order Detail**

<u>Description of Modification or Change Order – MOD 00231</u> Wilshire/La Brea Station Plaza Standby Generator and Load Bank Procurement	
<u>Change Order Dates:</u>	
Scope of Work approved	November 07, 2024
Not to Exceed amount issued (NTE)	November 18, 2024
<u>Elapsed Time for Executing Change Order:</u>	
Using new delegated process,	7 workdays
Estimate using former Board approval process Agenda for the January Board	55 workdays
<u>Cost of Change Order:</u>	
Metro Independent Cost Estimate (ICE)	\$1,984,603
Contractor Stated Proposal (CSP)	\$2,477,728
Negotiated Amount	\$2,324,954
Percentage of negotiated amount <i>over/under</i> (ICE)	14.64%
Amount less than the Contractor's Stated Proposal (CSP)	\$152,774

Spot Check #4 – Airport Metro Connector 96th St. Transit Station Project - Contract C1197**Change Order Detail**

<u>Description of Modification or Change Order – MOD 00049</u> Improvements of the North-end Perimeter Site Fencing	
<u>Change Order Dates:</u>	
Scope of Work approved	October 30, 2024
Not to Exceed amount issued (NTE)	November 18, 2024
<u>Elapsed Time for Executing Change Order:</u>	
Using new delegated process,	12 workdays
Estimate using former Board approval process Agenda for the January Board	51 workdays
<u>Cost of Change Order:</u>	
Metro Independent Cost Estimate (ICE)	\$1,166,373
Contractor Stated Proposal (CSP)	\$1,349,528
Negotiated Amount	\$1,134,517
Percentage of negotiated amount <i>over/under</i> (ICE)	2.73%
Amount less than the Contractor's Stated Proposal (CSP)	\$215,011

ATTACHMENT B (JANUARY 2025)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
<p>#1 Contract C1197 Airport Metro Connector LRT Roof Excessive Deflection MOD - 0141</p>	<p>I have requested a response from the Project Management team to a series of questions to justify Metro's reasoning.</p> <p>To streamline future adjustments, it is recommended to implement engineering controls and monitoring systems to detect anomalies early in the project lifecycle. Additionally, Metro's quality assurance protocols could benefit from enhancements that balance safety, quality, time, and budget considerations. For instance, ensuring adequate time for structural completion before commencing finishing works could prevent similar change orders in the future.</p>	<p>I received an email reply from the Project Manager on 11/13/2024. He stated that my series of questions justifying processes, cost, and Metro's reasoning of approval will be replied to by EOB 11/15/2024</p> <p>Response from Airport Metro Connector Program Management</p> <ul style="list-style-type: none"> a) The variation between the ROM, ICE, and final Change Amount resulted from additional RFI details and evolving market and project conditions that increased costs. After contractor negotiations, the increase was deemed justifiable. A cost-benefit analysis weighed deflection corrections against schedule impacts, leading to the most efficient solution. Two in-person negotiation rounds ensured the contractor's proposal was accurate and aligned with field performance. b) Recovery costs were deemed unfeasible for AMC due to complex project conditions, including delegated designs, challenging field scenarios, tight schedules, logistical constraints, and structural steel integration. Lacking evidence of significant design or workmanship issues by the Engineer of Record (EOR) or Contractor, no basis exists to invoke warranties or pursue recovery. 	
<p>#2 Contract C1120 WS Purple Line Extension 2 Storm Drain /Unforeseen conditions MOD - 00227</p>	<p>I have requested a response from the Project Management team to a series of questions to justify Metro's reasoning.</p> <p>The prime contractor and infrastructure designer did not account for the sewer lateral in their plans because there was no indication in reference documents provided by the Los Angeles Bureau of Engineering (LABOE). The contractor utilized utility location methods (i.e., potholing and GPR) which were unsuccessful. I reviewed the contractor processes and as-build utility records with the Los Angeles Bureau of Engineering (LABOE), which revealed no records of the private sewer lateral and supports the justification of the change order.</p>	<p align="center">Agreed</p>	
<p>#3 Contract C1045 Purple Line Extension 1 Transit Project Wilshire/La Brea Station Plaza stand-by generator and load bank procurement. MOD 00231</p>	<p align="center">None</p>	<p align="center">No Comment</p>	
<p>#4 Contract C1197 Airport Metro Connector (AMC) 96th Street Transit Station Improvements of the north-end perimeter site fencing MOD 00049</p>	<p align="center">None</p>	<p>The change includes costs associated with the design, materials, and construction that were necessitated by the increased number of bus chargers and modifications implemented by the LADWP.</p>	

ATTACHMENT B (JANUARY 2024)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
<p>#1 Contract C1136: Division 20 Portal Widening Turnback Project MOD-0109: Lighting Various Civil and Electrical Changes</p>	<p>The OIG recommends continuing forward with cost recovery from the Designer of Record.</p>	<p>Agreed</p>	
<p>#2 Contract C1197 Airport Metro Connector Transit Station/96th Street Station MOD 0027 - Low Voltage Cabling</p>	<p>The OIG recommends that the project office contacts the Airport monorail construction support team and recommend they install the Low Smoke Zero Halogen (LSZH) type fiber optic cable also.</p>	<p>The Project will coordinate with LAWA to install Corning's NFPA 130 compliant optical cable type which also meets Low Smoke Zero Halogen (LSZH) classification to be consist with the optical cables on AMC project.</p>	
<p>#3 Contract C1045 Purple Line Ext. Section 1 CO-0045: SCE and LADWP Change to Electrical Rooms and Equipment (Construction with minor design).</p>	<p>The OIG recommends staff work closely with SCE and LADWP to confirm their approvals for the requested work and to update any MRDC standard or specification to ensure that Metro corrects any out of date standards in relations to SCE or LADWP. It is recommended that Management discuss with the Diversity and Economic Development Department if the standard change order language might be revised to indicate a particular SBE/DBE goal for the change order "unless the contractor has already met the SBE/DBE goal for the contract as a whole".</p>	<p>#3 (Top Half): The Project will continue to work closely with DWP/SCE. Metro engineering (Gateway) can look into updating the MRDC with some of the more significant changes that DWP/SCE requested but It should be noted that many of the changes that LADWP and SCE request are not in the ESR Manual or any other type of standard but came about due to safety concerns as they progressed through the work in the field. #3 (Bottom Half): The Project Manager and DEOD clarified the Contract requirements for achieving the DBE goal for Changed Work in the above attached letter.</p>	
<p>#4 Contract C1152: STATIONS Purple Line Ext. Section 3 CO-091.2: Water Supply Loop System at Wilshire & Federal Intersection</p>	<p>None</p>	<p>None</p>	

ATTACHMENT B (OCTOBER 2023)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
<p>#1 Contract C1136: Division 20 Portal Widening Turnback Project MOD-0093: Rebar for Contact Rail Encasement</p>	<p>The OIG recommends an updated ICE reflecting the complete work that should have been requested to aid in the negotiations with the contractor for final settlement. Lessons Learned is to evaluate ductbanks in trenches for compliance with applicable city standards and loading requirements for static and dynamic loading demands when installing these. Future design plans should include this as a requirement to check.</p>	<p>None.</p>	
<p>#2 Contract C1151: TUNNELS Purple Line Ext. Section 3 CO-011: Extension of Time and Re-sequencing of Contract Work</p>	<p>The OIG recommends that a determination be made whether the Tunnels contractor can be held liable for any costs incurred from the Station contractor, and vice versa, when delays occur that are the responsibility of a contractor and further study potential project recovery time.</p>	<p>The Metro project team has assessed the cost responsibilities in accordance with the Contract, which does not provide this mechanism. The overall project recovery time is being addressed by implementing the accelerated resequencing schedule.</p>	
<p>#3 Contract C1152: STATIONS Purple Line Ext. Section 3 CO-0109: Extension of Time</p>	<p>Lessons Learned from previous contracts was to state a delay compensation rate. This action was included in this contract (delay compensation rate of \$24,000/day) and eliminates future disagreements and litigation.</p>	<p>The C1152 contract procurement commenced prior to the other contract lessons learned, and the C1152 Contract includes the same Delay Compensation terms as the other contracts.</p>	
<p>#4 Contract C1152: STATIONS Purple Line Ext. Section 3 CO-0109: Acceleration and Re sequencing of Contract Work</p>	<p>The OIG recommends Metro evaluate these three change orders in order to reduce the time impact to the schedule and increase work acceleration.</p>	<p>Metro minimized the time through acceleration and re-sequencing implemented by COs to both C1151 and C1152 Contracts resulting in acceleration of project substantial completion to January 2027.</p>	

ATTACHMENT B (JULY 2023)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
July 2023 #1 Contract C1197 Airport Metro Connector MOD-0245: Bulletin 28 – Onsite DWP & Bus Charging	The OIG recommends Metro review all construction plans for satisfaction of the zero-emissions bus fleet objective to add as appropriate electric charging capability.	Confirmed. Project has been in consistent coordination with the Bus Operations Group since 2019. Initial coordination landed on 3 chargers which were included in the original construction bid contract. Additional coordination after release of original contract documents introduced the 2020 Layover Charging Analysis, which has led to four (4) additional chargers and an entire new LADWP Yard being placed into the project for seven (7) bus charging stations total. This final number and layout of bus chargers has been coordinated and confirmed with Metro Bus Operations.	Fall 2024 is the current estimated schedule
#2 Contract C1045 Purple Line Ext. Section 1 CO-0028: Expedite Cutterhead Removal at Tail Track	The lessons learned from this change order is to add to the initial Contract details on the tunnel boring machine interplay between the two projects and the cutterhead removal and scheduling.	Accept	
#3 Contract C1120 Purple Line Ext. Section 2 CO-0179: Provisions for WRS North Secondary Entrance	The OIG recommends continual monitoring of the City of Beverly Hill design plans as they near construction as to avoid any construction impacts, safety concerns and complications at the knockout panel.	The Project agrees with this recommendation and will continue to monitor the City's design. Currently, the City has paused the design to reassess its project budget.	
#4 Tunnel Contract C1151 Purple Line Ext. Section 3 MOD-0024: Claim-04 Gravel Seam Impact BR Tunnel Rings 399-486	The OIG recommends more geotechnical exploration in the development of the Geotechnical Baseline Report as to better identify the correct soil characteristics.	Extensive ground investigations were performed to provide data to support writing of the C1151 Geotechnical Baseline Report (GBR). Additional investigations help, but costly, they are not a panacea, as the alluvial soils of the Los Angeles Basin are heterogeneous (highly variable), so additional boreholes would not identify every change in the ground. The considered baseline using experience as well as borehole information presents the expected changes in the GBR. This enables pricing of risks that are within the control of the Contractor and not to transferring this ground conditions risk to the contractor. Metro Rail Design Criteria (MRDC) Section 5 GBR requirements are being revised <Metro Chief Engineer to confirm> to control use of 2022 ASCE GBR suggested guidelines, including ground investigation requirements, to better define baseline soil characteristics.	September 2023 <Metro Chief Engineer to confirm when the MRDC revisions will be completed>

ATTACHMENT B (APRIL 2023)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
April 2023 #1 Contract C0980 Regional Connector MOD-0245: 10-Inch Sanitary Sewer Relocation & Upsize existing 8-Inch Sewer to 12- Inch	The OIG recommends to Work with the City where construction is going to occur at the earliest possible time to determine their requirements so that those requirements can be negotiated, included in the bidding documents when released with correct information and requirements, and if the requirement change is caused by Metro's increased utilization of the utility or if it amounts to a betterment for which a sharing/contribution should be made.	Agreed. Projects should do their best to identify utility conflicts ahead of time, but depending on the area and available documentation that is not always possible. This work was impacted by both surrounding facilities and modified work sequencing in the intersection when the project changed the plan after realizing the utility impacts of the terminated AUR contract.	
#2 Contract C1045 Purple Line Ext.Sect.1 CO-0022 Fully Guarded Double Crossovers	The OIG recommends consulting with Operations on the desired headway speeds at the design phase so that these requirements can be added at the earliest possible times. This may be added to the Construction Departments Lessons Learned data base to have fully guarded double crossover rail to keep the minimum headway and protect rail cars to avoid possible derailment in the future in the initial design and specifications and avoid future change orders.	Concur that the Project's required crossover speeds need to be finalized during the design phase and those needed speeds, combined with the available station box crossover length and width, will determine if a fully guarded crossover is required and if it will be required to be included as part of the Project's design.	
#3 Contract C1120 Purple Line Ext.Sect.2 CO-0058: Project and Construction Site Delay Impacts	<p align="center">None</p>		
April 2023 #4 Stations Contract C1152 CO-0090.1 & MOD-0089 Purple Line Extension Section 3 UCLA Station - Additional LADWP Temporary Power Conduits	The OIG recommends: 1. For the Project to submit to the Lessons Learned data base, run by the Quality Assurance group, the events regarding coordination with LADWP (or another third-party utility) which required the increase in size of conduits and forced relocation of the ductbanks. By submitting information of these changes to the Lessons Learned data base, future projects will be warned that there might be an update to the electrical requirements applicable to their project. 2. The Metro Rail Design Criteria (MRDC) should get periodic updates to include new standards by agencies that review and approve Metro construction so that when future RFPs are issued they comply with those mandatory standards. This will not foreclose Metro seeking a waiver or amendment in the future from that entity on an individual project that might reduce the cost and that will not require a costly change order. Additionally, the MRDC should be updated to encourage early coordination with the third-party utilities to obtain their written agreement to the specifications for a project prior to the RFP issuance.	1. Agreement in sharing the LADWP standards (that were not previously made available to the project by LADWP) to be available for other Metro projects. 2. Third Party standards are maintained by the respective Third Parties and provided to Metro during the design phase for each project. Early coordination occurs with Third Parties; however, disclosing the current and applicable standards has at times not been consistent by the Third Parties. Metro is currently working with LADWP to establish a new Utility Cooperative agreement. Agreement terms: to include language where standards will be memorialized at the time of RFP issuance, language accommodating early involvement, language to establish a design freeze, language to define betterments, as well as other terms to minimize risks on projects. Similar agreements are also being pursued with other utility owners. It should also be noted that Metro is closely coordinating with all applicable City's and utility owners from an early engagement standpoint while the Projects are still in the planning phases. The following actions are currently being taken; Establishing and execution of Master agreements and Utility Cooperative Agreements with applicable City's and utility owners prior to the start of Preliminary Engineering and prior to the release of RFP's. Other general actions being taken include establishing more robust potholing and subservice investigations early on and engagement with utility owners early on to identify fatal flaws and pitfalls with alternatives. Pitfalls such as unavailability of power in the area to accommodate TBM's, addressing heavy relocations, identifying schedule challenges with relocations should they be required. The MRDC is a live document and goes through review and updates on a regular basis and usually before award of a major contract. MRDC is currently undergoing a major review and update. We have and will continue to share our MRDC with City of Los Angeles. The MRDC mainly refers to the Green Book for roadway and utility related items which is what almost all the Cities use as well. With the current efforts to engage the third parties prior to the release of the RFPs, we should be able to catch any third-party requirement that would be outside the Green Book and MRDC.	

ATTACHMENT B (January 2023)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
January 2023 #1 Contract C1136 CO-0121.1 Division 20 Portal Widening and Turnback Project - Site Improvements for Garfield Yard to Store New Special Trackwork	As was recommended in the prior quarterly construction change orders spot check report, the OIG recommends the issue of liability for sub-contractor's bonds and insurance be resolved, and further change orders follow the standard Metro construction practices and procedures.	Recommendation is noted. VCM is seeking a resolution to the sub-contractor bond and insurance for change orders.	
January 2023 #2 Contract C1045 CO-0015 Purple Line Extension Section 1 Station Artwork Architectural Glass	The OIG recommends that a final scope of work and agreed upon total costs be determined as soon as possible.	Metro acknowledges the OIG's recommendations and will work toward resolution of scope & cost disagreements involving the Architectural Art Glass. Negotiations are pending the contractor's confirmation on available dates for these negotiations. To avoid these potential impacts for future projects, WPLE 1 is working with the Metro Art department on a lesson learned session to help implement a change in the development of the artwork scope in future contracts. This will impact the contractual and procurement requirements for the artwork (timing, line item allowances, contingency) so that there is less cost discrepancy for the artwork between the time overall Construction Contract is developed and when the artwork is procured.	
January 2023 #3 Contract C1120 CO-0023.2 Purple Line Extension Section 2 Relocated UPE Plenum at Westfield Mall	None.		
January 2023 #4 Tunnels Contract C1151 MOD-0007.2 Purple Line Extension Section 3 Revisions to Southern California Edison (SCE) Power Connection	The OIG recommends that in all future contracts where it is possible to consolidate planned multiple street utility construction works, that a single trench be dug and both temporary and permanent power conduits be installed in the same trench at the same time as to reduce costs and minimize impacts to the neighborhood. The OIG further recommends, that when the Metro management authorize work and exercise their authority under this Delegation Policy, there should be a maximum period after that action that it must be reported in the quarterly program management report, and not wait 3 years to negotiate the modification and report an action to the Board.	PM and V/CM have committed to working together as necessary to analyze the issue and seek resolution. As part of that process, the two departments will work with the Office of the IG to close out the action.	

ATTACHMENT B (October 2022)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
<p>October 2022 #1 Contract C0980 MOD-0239 Regional Connector Transit Corridor Project - Additional AT&T Duct bank Installations at 2nd Street – Construction</p>	<p>The OIG acknowledges the unknown underground site condition of numerous conflicting underground utilities, but the existing AT&T communication vaults that were both too small and in poor condition were known prior to the beginning of contract. It should be noted that AT&T did not initially provide design or informational requests for new vaults and now Metro must create a change order and pay the contractor for an oversight on the utility's behalf.</p> <p>The OIG recommends, as a Lesson Learned, that in project planning for Metro to ask the utility company to acknowledgement that all vaults, duct banks, and utility lines conform to current specifications and are in satisfactory condition. It is prudent for Metro to be aware of the utilities condition before entering into a construction contract.</p>	<p>Agreed. The AT&T infrastructure was not in a condition that could be hung in place safely resulting in the construction of a new system. It would be best to understand the condition of all utilities to the best possible extent prior to start of construction but not always possible.</p>	
<p>October 2022 #2 Contract C1136 CO-0017.4/MOD 0037 Division 20 Portal Widening and Turnback Project - 1st Street Bridge Continuous Monitoring</p>	<p>As was recommended in the prior quarterly construction change orders spot check report, the OIG recommends the issue of liability for sub-contractors claims and bonds be resolved so that it is not necessary to use NTE change order methods, and further change orders follow the standard Metro construction practices and procedures.</p>	<p align="center">Agreed</p>	
<p>October 2022 #3 Contract C1197 MOD-009 Airport Metro Connector Transit Station Bulletin 16 – Light Rail Transit (LRT) Fence Updates</p>	<p>The OIG recommends Metro consider updating Metro's design criteria and necessary specifications to reflect current 2022 California Seismic standards in the MRDC and future requests for proposals to build better and be prepared for future earthquakes. This may be considered a lesson learned.</p>	<p>The OIG recommendation may not completely reflect the issue. The contract MOD for bulletin 16th was the result of design change during the construction. In reviewing of the contractor's submittal, two things became apparent. First, the picket members were very heavy and disproportionate to the size of the horizontal members carrying them which created a structural concern. The second issue was a quality/constructability concern as the design shown on the contract drawings and the shop drawings required each picket to be field welded in place. All welds are required by the original Contract Documents to be ground smooth. The design change addressed both issues. For the structural issue, the thickness of the 4" o.c. pickets were reduced although the depth of the horizontal members was increased. For the constructability issue, the pickets were panelized so that they could be shop fabricated and craned into place. The panels were attached to the horizontals with bolts rather than welds, speeding up the installation time which would reduce crane use and reduce field welding and grinding. None of these issues were related to Metro's design criteria or technical spec.</p>	
<p>October 2022 #4 Contract C1045 MOD 0159 Purple Line Ext. Sect. 1 Track Level Access Openings at Wilshire/Western, Wilshire/La Brea and Wilshire/ La Cienega</p>	<p>None</p>		

ATTACHMENT B (August 2022)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
August 2022 #1 Contract C1136 MOD-0029 Division 20 Portal Widening and Turnback Project - Time Extension for MOD-20 Addl Scope and Addl Requirements for DIV 20	The OIG recommends, that all future construction contracts include a capped amount per day to pay the contractor when Metro stops critical path construction work or contractor incurs significant delays due to unforeseen causes.	<p align="center">Agreed</p>	
August 2022 #2 Contract C1136 CO-0011.3 Division 20 Portal Widening and Turnback Project - 1st Street Viaduct - Crack and Spall Repair	1) The OIG recommends that the scope of work should be agreed upon as soon as possible. 2) The OIG recommends the issue of liability for sub-contractors claims and bonds be resolved, and further change orders follow the standard Metro construction practices and procedures. We further recommend that the language concerning bonds and sub-contractors in the Metro standard forms for modification/change orders be moved to the Metro standard contract terms and conditions.	<p align="center">Agreed</p>	
August 2022 #3 Contract C1120 CO-0041 Purple Line Ext. Sect. 2 Tunneling Suspension Associated with Abandonment of Oil Wells	The OIG recommends Metro consider implementing Unilateral change orders when the contractor is claiming compensation for delays greater than the contract cap permits.	<p align="center">Agreed</p>	
August 2022 #4 Stations Contract C1152 CO-0035.1 Purple Line Ext. Sect. 3 VA Steam Tunnel Size Increase and Redundancy	Now that the cost schedule proposal (CSP) has been received, the OIG recommends that the Contractor's CSP be thoroughly evaluated to finalize the change order to enter into an agreed upon modification to replace working on a NTE basis as soon as possible.	The Contractor has split the CSP into two parts. Part 1 is the heavy civil work. Part 2 is the Mechanical / Electrical / Plumbing work. Metro has finalized their analysis of Part 1 of the Contractor's CSP of the change and should finalize a value with the contractor imminently. Metro has performed an initial round of fact finding and analysis of Part 2 and is engaging in further meetings with the Contractor to resolve the differences.	

ATTACHMENT B (April 2022)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
April 2022 #1 Contract C0988 MOD-0551 Crenshaw/LAX Transit Corridor Project Landscape Changes – Park Mesa	none		
April 2022 #2 Contract C0980 MOD-00230 Regional Connector - Transit Corridor Project Alameda Emergency Stair Exit (ES2)	The OIG recommends in-house plan review be as fully completed as possible before Metro groups sign off on the design plans.	The project team agrees with OIG and does have both project staff and Metro staff provide reviews for all plans. This change originated with the change in FLS requirements within the Wye which was identified after award of contract.	
April 2022 #3 Contract C1045 MOD-0144 Purple Line Extension Sect. 1 Construction LA Cienega Station During Mining	none		
April 2022 #4 Contract C1045 MOD-0147 Purple Line Extension Sect. 1 Vapor Extraction Street Restoration	none		

ATTACHMENT B (January 2022)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
<p>January 2022 #1 Contract C0980 MOD-00218 Regional Connector - Transit Corridor Project Metro Eastside Access Improvement Project "Segment 2" Esplanade and other improvements along Alameda Street – Construction Only</p>	<p>none</p>		
<p>January 2022 #2 Contract C1136 CO-00020.2 Division 20 Portal Widening and Turnback Project Differing Site Conditions - Connections to Existing Ductbanks and Unknown Utilities Impacts</p>	<p>The OIG recommends that Metro continue to track the time and materials used by the contractor while negotiating the Contractor's cost and schedule proposal and to bring this change order to a final award amount.</p>	<p>Final award amount for CO-00020.2 has been reached. Negotiations with the Contractor (TPC) consisted of multiple workshops to reach agreement on rates of production, activity duration, labor, materials and equipment required, complexity of the work. Since agreement on these items was challenging, Metro made a business decision to start with the contractor's estimate and deduct items that were not allowed in the contract. A final settlement for CO 20 was reached at \$43.3M, approximately \$10M under the contractor's original estimate. A time delay for changes related to CO 20 in the amount of \$6M, or 6 months at \$1M per month, has also been agreed upon for these changes.</p>	<p>Substantial Completion and commissioning of the turnback track is scheduled for late Fall of 2024 to coincide with Revenue Operations of PLE1. Final project completion could be as much as a year later.</p>
<p>January 2022 #3 Contract C1120 CO-00034 Purple Line Extension Sect. 2 Century City Constellation Station Storm Drain and Sanitary Sewer Relocation Construction of MOD 70 Design</p>	<p>none</p>		
<p>January 2022 #4 Contract C1152 MOD-0007 Purple Line Extension Sect. 3 Replacement Parking at VA Hospital Lot 42 During Station Construction</p>	<p>The OIG recommends that the Contractor be instructed to timely submit cost proposals, enter negotiations, and sign agreements before work is performed so Metro can process the work order close in time to work being performed, not only to pay the contractor but to help ensure the sub-contractors are paid timely.</p>	<p>No comments</p>	

ATTACHMENT B (October 2021)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
<p>October 2021 #1 Contract C0980 MOD-00206 Regional Connector - Transit Corridor Project Add Wye Junction Fan Plant - Construction</p>	<p>Since the Board approved of a budget for this item in 2015 at \$12 mil., the cost has increased to a total of \$21,186,000 (a 77% increase). This Fan System cost has been reported in pieces, as parts were completed, but not as a whole to indicate the cost creep overall over time. We recommend that when LOP information is being periodically provided to the Board that it includes a summary, per project, to show historical cost information over the life of each project. That summary should indicate if they anticipate completing the project within the current LOP and how many LOP increases have occurred so far.</p>	<p>The initial board item in 2015 for the fan plant was an ROM at the time and had yet to be fully designed and estimated for a complete change. As the project progressed the design and went into construction, the team worked through the negotiations for the full scope of the fan plant. As of now, there has only been one LOP increase and the project has anticipated that the project would fall within the LOP to date. Project team will work with Program Management leadership on how information is reported and follow Program Management's direction for any changes on how LOP is reported.</p>	
<p>October 2021 #2 Contract C1136 MOD-00020 Division 20 Portal Widening and Turnback Project Additional Scope and Additional Requirements for the Division 20 Portal Widening and Turnback Project</p>	<p>The OIG recommends: 1. When Metro needs to expedite a project, include Operations in the initial planning phase early, prior to and during design so they can provide constant input during the design. 2. Explore with Operations if they need additional resources to dedicate full time to assist in the intense design, planning, and implementation pre-opening phases of Metro's rail infrastructure/capital projects, or other ways in which Program Management and Operations can work together to approach these projects to maximize cooperation, communication, and assistance. 3. Have the Legal Department review our designer contracts to determine if they are adequate to hold contractors accountable, enforceable, and require use of bonds and proof of adequate insurance to cover errors of this type and resulting in cost of this magnitude.</p>	<p>1. Project alignments were revised during planning phase to accommodate additional storage capacity and technical requirements required for turnback headways. As design progressed, Operations participated in frequent design review meetings. 2. Additional Operations resources during design phases would be beneficial and help produce more comprehensive reviews. 3. Project team is coordinating with County Counsel on review of designer contracts.</p>	
<p>October 2021 #3 Contract C1045 MOD-0 137 Purple Line Extension Sect. 1 Increased Well Maintenance at Western Shaft due to Groundwater Chemistry Impacts</p>	<p>see #4 for recommendation</p>		
<p>October 2021 #4 Contract C1045 MOD-00138 Purple Line Extension Sect. 1 Additional Dewatering Treatment and Discharge Impacts at Western</p>	<p>The OIG recommends that all dewatering change orders for this project should be evaluated or audited. The Geotechnical Baseline Report issued by the consultant to Metro was not accurate for the soil type, ground water, and hydrogen sulfide levels for each segment of Purple Line Section 1 and the consultant might be held liable for some of the costs of differing site conditions not correctly determined by the consultant. Unplanned dewatering site conditions also cost Metro \$15.8 mil. at the La Brea Station and \$16.8 mil. at the La Cienega Station in 2020 and 2019 respectively.</p>	<p>The dewatering MODs for WPLE-1 have been already been evaluated as part of the CN process. In order to minimize the potential for future DSCs on other Projects, consideration should be undertaken to expend more resources during Preliminary Engineering (PE) to more accurately project the actual conditions encountered. The costs of additional PE should be weighed against the increased base bid prices, or future Change Order costs if no additional PE efforts are undertaken. Valid additional costs to Metro, via the base bid or Change Order, will be incurred either way. It is premature at this time to hold the PE Consultant liable for all or a portion of the costs of this MOD.</p>	

ATTACHMENT B (July 2021)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
July 2021 #1 Contract C0980 MOD-00196 Regional Connector - Transit Corridor Project Construct the 2nd & Broadway Station Overbuild Load Transfer System	none		
July 2021 #2 Contract C0980 MOD-00202 Regional Connector - Transit Corridor Project Revise Communications Radio System Scope of Work- Construction	The OIG recommends that after installation of the new radio system that interface with Los Angeles fire, police and sheriff departments be tested and verified for their signal strength and connectivity.	Agreed, all radio systems will be fully tested and verified for signal strength and connectivity	
July 2021 #3 Contract C1045 MOD-0131 Purple Line Extension Sect. 1 Wilshire/Fairfax Station Subgrade Differing Site Conditions	The OIG recommends that after a DRB issues its recommendations that favor the contractor, Metro act swiftly to move forward with a change notice to the contractor and not delay payment to the contractor, less any credits owed to Metro. We understand in this particular case the contractor assigned a lower priority for processing this change notice over many others.	In this case there was no requirement for Metro to issue a Change Notice due to the DRB ruling. The Contractor (STS) chose to delay providing Metro with a cost proposal associated with the DRB ruling due to other higher Contractor priorities. After the eventual receipt of the DRB ruling proposal from the Contractor, the costs were negotiated, and a MOD issued (w/o any Change Notice being created). It should be noted that whether a Change Notice is issued or not, the Contractor has the right to submit a proposal whenever and for whatever they perceive as changed work (via a Request for Change). Section 1 has and continues to issue Change Notices in a timely manner when Metro recognizes merited changed scope of work.	
July 2021 #4 Contract C1152 MOD-0014 Purple Line Extension Sect. 3 Revisions to Westwood/UCLA Station Entrances – Design Only	none		

ATTACHMENT B (April 2021)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
April 2021 #1 Contract C0988 MOD-00253.3 Crenshaw/LAX Transit Corridor Project Landscape Changes – Park Mesa	The OIG recommends that we identify quickly the differences in cost between the new scope of work from the contract and finalize plans and the cost with the prime Contractor.	-Agree and recommendation will be incorporated into C/LAX Project Lessons Learned. -C0988 Contract Team has started to identify the differences in cost between the new scope of work from the contract. Additionally, new scope of work will only be processed if it is a safety related change.	
April 2021 #2 Contract C0980 MOD-00188 Regional Connector - Transit Corridor Project 2nd/Hope Pedestrian Bridge - Construction	no recommendation concerning this change order		
April 2021 #3 Contract C1120 MOD-0095 Purple Line Extension Sect. 2 Station and Bicycle Parking, Architectural Features Design and Construction Changes at Wilshire/Rodeo & Century City Constellation Stations	The OIG recommends that Purple Line, Section 3, be immediately evaluated to determine if the MRDC architectural updates and the Metro bike hub system changes have been incorporated into the Purple Line Extension Section 3 Transit project. This will ensure consistency, compliance with the MRDC, and cost assessments to be determined and negotiated at the earliest possible time.	Purple Line Sect #2 response: Noted. Purple Line Sect #3 response: The WPLE3 contract included the latest MRDC requirements for bike hubs at both stations at time of bid, which minimized changes to the WPLE3 contract.	
April 2021 #4 Contract C1120 MOD-0095 0100 Purple Line Extension Sect. 2 Century City Constellation Main Entrance - Construction	The large cost disparities between the ICE and a Contactor's proposal on high dollar transactions should continue to prompt further technical and commercial evaluation in order to arrive at a fair and reasonable price. The OIG recommends that the ICE be evaluated by the Estimating department to further evaluate the significant differences between the Contractor's proposal and their independent estimate utilizing both technical and commercial evaluation.	ESTIMATING response: Metro Estimating will review the ICE and CSP and work with V/CM and Project Management staff to evaluate the differences. Purple Line Sect #2 response: Project staff will continue to involve Estimating staff in scoping discussions to ensure that they have a full understanding of the scope of work for all Change Work.	

ATTACHMENT B (January 2021)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
<p>January 2021 #1 Contract C0980 MOD-00184 Regional Connector - Transit Corridor Project Expanded Duco Yard and Temple Street Sanitary Sewer Work</p>	<p>The OIG recommends that future contracts with the designer should include verification of sewers identified as abandoned, and to document the verification on the construction drawings if the cost of such verification is minor and the consequences of reliance on erroneous information is significant. Additionally, the OIG recommends that the as-built record drawings at the City be updated.</p>	<p>Planning and engineering need to rely on as-built records for much of their work. However, where key utilities are involved, it is best that their condition and status be validated during the preliminary design phase. This investigation is often expensive and not easily performed without site investigation. The engineer must use his/her judgement to determine which utilities require physical investigation and inspection. Project budget contingency should be set aside for utility discrepancies that may be discovered during construction. Agree that even minor utilities, improperly documented, can have a significant cost and/or schedule impact to a project and should be investigated early, to the extent possible. The City is the best entity to ensure that underground maps are complete.</p>	<p>No further action from Regional Connector as project design has already been completed. However, efforts are continually made to perform potholing investigations for verification prior to construction so as to avoid impacts to schedule should discrepancies be found.</p>
<p>January 2021 #2 Contract C1045 MOD-00121 Purple Line Extension Sect. 1 Alternate Soil Disposal</p>	<p>California laws, including Senate Bill 1383 of 2016 set mandatory targets to reduce waste going to landfills. Metro developed a recycling policy (GEN 51) in response to State recycling goals and to support Metro's sustainability goals. The Conditional Use Permit for the Chiquita Canyon Landfill was set to expire and the Landfill operator sought a new permit, which was granted in July, 2017. The new permit requirements limits the rate of tonnage of dumping allowed, hours of operation, and the county set other multiple requirements that Chiquita Canyon must adhere. The OIG recommends:</p> <ol style="list-style-type: none"> 1. Construction waste disposal options are utilized to minimize project costs and to help achieve the reduction goal of a 75% reduction in waste by 2025; 2. Project teams work very closely with the Metro Sustainability Department, State, Los Angeles County, other regulators, landfill owners, and contractor's personnel, to determine options consistent with GEN 51 for the reuse of soils and construction debris in the current or other construction sites; 3. When a Board member has a matter come before them at their respective municipalities that can potentially effect Metro projects, if they would give notice to Metro of the matter, Metro can determine how its projects will be impacted and possibly address the matter with the municipality or 3rd party prior to the matter being approved including possibly negotiate that the terms of a permit not allow price increases or other impacts on Metro projects where contractual commitments have previously been negotiated in reliance on previous conditions; 4. LA Metro evaluate how other LA Metro projects for which a contract was entered may be impacted by the newly imposed landfill mitigations and higher fees. 	<p>Metro acknowledges the recommendations listed and provides the following responses below:</p> <ol style="list-style-type: none"> 1. Per contract, the project must divert/recycle 75% of waste. Purple Line Section 1 has diverted 100% of excavated clean material on the project to be reused as beneficial cover or fill at offsite projects. 2. The Purple Line Section 1 project has a member of the Metro Environmental Compliance and Sustainability Department (ECSD) on staff. This team member updates project management and contractors on opportunities to reduce waste impacts as they become available across the county. 3. Acknowledged 4. ECSD management will review awarded projects and available facilities and make recommendations on where to make changes to disposal practices as needed. 	
<p>January 2021 #3 Contract C1120 MOD-0091 Purple Line Extension Sect. 2 Increase UPS Spare Capacity at Wilshire Rodeo and Century City Constellation Stations</p>	<p>The OIG recommends that immediately prior to sending out an RFP, Metro should insure that the most current MRDC is used.</p>	<p>In this case, the updated MRDC Section 8 was added to the RFP near the end of the solicitation period, but conflicts with other contract documents were not identified because of the late issuance of the update. Staff agree that all future changes to the MRDC should be coordinated by Metro Engineering and issued before future RFPs are released.</p>	

ATTACHMENT B (January 2021)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
January 2021 #4 Contract C1152 CO-0005.1 Purple Line Extension Sect. 3 VA Hospital Replacement Parking for Lot 42 During Station Construction Phase	The OIG recommends that the Project office and Real Estate continue to work closely and aggressively to come to a full resolution with the VA hospital and the contractor on the modified costs.	Agree	

ATTACHMENT B (October 2020)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
<p>October 2020 #1 Contract C0988 MOD-00485 Crenshaw/LAX Transit Corridor Project Case 5 Bedding Required by LABOE</p>	<p>Since the 'Green book' states the support and materials for sewer and storm drain pipe are to be encased in concrete, the OIG recommends that the LA Metro rail standard drawing US-014, be updated to reflect the required City standard and Metro may negotiate with the LABOE to adopt a different standard for specific projects as warranted.</p> <p>We further recommend, as discussed in previous reports, that Metro study the large discrepancies between the Metro ICE and the award amounts to determine if there is a method by which those discrepancies can be narrowed. This recommendation applies to many of the Spot Checks reviewed in this Report, and is based also on a Metro audit completed by the Management Audit Services Department that noted significant discrepancies in these amounts to be a frequent occurrence.</p>	<p>Recommendation will be incorporated into C/LAX project Lessons Learned.</p>	
<p>October 2020 #2 Contract C1045 MOD-00111 Purple Line Extension Sect. 1 Fairfax Paleo Zone Modified Limits</p>	<p>The OIG recommends future GBR's include a more comprehensive underground site assessment to determine a better approximation of the marine and paleo geological layers. In this instance, a robust underground assessment would have avoided the costly change order. However, the additional excavation costs would have been included in the higher base bid value.</p>	<p>Recommendation will be incorporated into PLE1 project Lessons Learned.</p>	
<p>October 2020 #3 Contract C1120 MOD-00080 Purple Line Extension Sect. 2 Demobilization and Remobilization due to COBH Moratorium</p>	<p>The MOA between Metro and COBH imposes additional restrictions on Metro and adds costly change orders to the original contract.</p> <p>The OIG recommends Metro adopts a standardized MOA for use in negotiations with all jurisdictions within Los Angeles County and utilizes this agreement for every construction project going forward in each respective jurisdiction and that budget estimates for projects should be revised as necessary to take into consideration MOAs entered into.</p>	<p>Agreed.</p>	
<p>October 2020 #4 Contract C1151 MOD-0004.1 Purple Line Extension Sect. 3 Increase Ground Water Treatment Plant Capacity at Tail Track Exit Shaft</p>	<p>It is the OIG's understanding that water pump tests and water quality tests were performed, but they were performed at the original location, the Army Reserve site, which is no longer the correct shaft location. Now the site is at the Veterans Administration property. A change in location can greatly affect both the levels and quality of the groundwater, thus increasing the revised dewatering process.</p> <p>It is critical that the Real Estate Department be included at the earliest possible time in negotiating the property requirements for a project. Having to change location plans after a contract award can have significant scheduling and expense consequences.</p>	<p>The location of the Tail Track Exit Shaft had to move from an environmentally cleared site occupied by the Army reserve site to the US Department of Veterans Affairs West Los Angeles campus when it became evident that the US Army Reserve was unwilling to allow the use of this location for either construction laydown or a permanent Metro Facility. Metro Real Estate and Project staff successfully negotiated with the Department of Veterans Affairs to enable relocation of this construction laydown area and permanent facility to their West Los Angeles Campus.</p>	

ATTACHMENT B (October 2020)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
<p>October 2020 #5 Contract C1151 MOD-0005 Purple Line Extension Sect. 3 Addition of Sepulveda Staging Area to Compensate VA Site Reduction</p>	<p>The Purple Line Extension 3 was a 'next decade project' and was accelerated to be completed in the next 5 years with many project processes that had to be compressed to meet the schedule. We also understand that the real estate acquisition process is contingent on the funding being in place.</p> <p>The real estate acquisition process and all other real estate arrangements must be negotiated as early as possible and negotiate those property rights strategically to ensure we have our real estate needs met at the earliest and least expensive manner possible.</p>	<p>The space available for staging at the Tail Track Exit Shaft on the Department of Veterans Affairs Campus is limited; being located in a nationally designated historic district. Metro Real Estate and Project Staff have and are working closely together, in a timely manner to ensure real estate acquisitions are coordinated with project need dates to minimize overall risk and cost to Metro in delivering the project.</p>	

ATTACHMENT B (August 2020)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
August 2020 #1 Contract C1045 MOD-00095 Purple Line Extension Sect. 1 Transit Project: Phase 5 Golder EOR Mitigation Plan Implementation	<p>The OIG is in agreement with applying extra safety precautions that the Metro project office has put forward. Where conditions are relatively unique to the tunneling industry, more prescriptive specifications for means and methods in these zones is warranted.</p> <p>Since the Contractor, Golder Gas, performed the entire mitigation plan including removal and mitigation, the OIG recommends that LA Metro ensure that Golder Gas is held contractually, jointly, and severally liability for any future incident involving gas in the area where the soil vapor extraction wells and the monitoring wells are installed and abandoned. This is the common practice in environmental cases where a "consulting expert" is hired to monitor and mitigate a hazardous substance issue.</p>	<p>The Section 1 Project will review the indemnification text issued to Golder that was required by STS in order for Golder to proceed with the work. This indemnification will determine what Golder's future obligations are.</p>	
August 2020 #2 Contract C1045 MOD-00106 Purple Line Extension Sect. 1 Center Muck Shaft at La Brea (ECI-03)	<p>The OIG recognizes that this type of shaft at the La Brea station can serve a legitimate purpose and that the OIG recommends that use of such methods should be considered and contemplated in future project specifications and a reserve for same should be made when the savings in time, expense, and safety outweigh the cost of such a shaft.</p>	<p>OIG comment received will be included in the lessons learned.</p>	
August 2020 #3 Contract C1045 MOD-00107 Purple Line Extension Sect. 1 Center Muck Shaft at La Brea (ECI-03)	<p>The OIG is concerned that a bid of 40% over an ICE, when you are in a noncompetitive circumstance, may not be a good faith offer or bad communication on specifications. Such behaviors can have the effect of damaging a relationship during an early phase of construction and create distrust that can harm project collaboration in the future. We appreciate a contractor's willingness to proceed on work even without a commitment from Metro in some cases for the payment for that work, but recommend the contractor exercise greater care in formulating its proposals and that Metro be clear and fair but diligent and firm in its ICE calculations and negotiations stance.</p>	<p>OIG comment received. Contractor will be reminded to have appropriate personnel attend the fact finding and provide timely complete CSP in order to resolve issues in a collaborative manner.</p>	

ATTACHMENT B (August 2020)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
<p>August 2020 #4 Contract C1120 MOD-00073 Purple Line Extension Sect. 2 Century City Constellation Station Track Work Extension</p>	<p>1. The OIG is concerned that a bid is almost 3 times over the ICE, when you are in a noncompetitive circumstance, may not be a good faith offer or bad communication on specifications. Such behaviors can have the effect of damaging a relationship during an early phase of construction and create distrust that can harm project collaboration in the future. We appreciate a contractor's willingness to proceed on work even without a commitment from Metro in some cases for the payment for that work, but recommend the contractor exercise greater care in formulating its proposals and that Metro be clear and fair but diligent and firm in its ICE calculations and negotiations stance.</p> <p>LA Metro is having to absorb the cost of track extension change orders that arose due to errors and omissions on the part of the engineering consultant WSP. The OIG was informed that WSP miscalculated the braking distance in the initial project definition drawings that were supplied to the construction contractor. Metro will have to cover this expense with the contractor, but should look to the design engineering firm for reimbursement to Metro of the costs it would not have had to otherwise incur less amounts saved or mitigations.</p> <p>2. The OIG additionally recommends that Metro review the current Metro Rail Design Criteria (MRDC) compared to the newly released FRA track design standards for accommodating a train entering a stub-end to determine if any modification or update to our MRDC is warranted.</p>	<p>1. If a Cost and Schedule Proposal (CSP) is significantly higher than the Independent Cost Estimate (ICE), Metro's Contract Administrator and the Project Team engages in further meetings with the Contractor to clarify scope in order to determine the source of the discrepancies between the two estimates. These meetings are professional in nature, and often result in favorable resolution on a price that is somewhere between the ICE and the revised CSP. This process ultimately leads to the execution of mutually agreed upon Contract Modifications, and avoids costly disputes related to Changed Work.</p> <p>Related to the cost of the change, if WSP had calculated the braking distance correctly, the Contractor's proposal price would have included the cost for the trackwork that was recently added by Contract Modification. As a result, the awarded contract value would have been slightly higher, and the project contingency slightly lower at Notice to Proceed. The only additional cost that this error by WSP may have created is a theoretical premium for paying for added trackwork in a non-competitive environment, which would be difficult to prove. It should be noted that the difference between the executed Contract Modification price and the ICE was about 17%, or \$171,000. As a result, it is likely that it would be difficult for Metro to determine if it paid a non-competitive premium. That said, the recommendation will be discussed with senior executive management in VCM and Program Management to determine if any action against WSP will take place.</p> <p>2. This recommendation will be referred to Metro Engineering for consideration.</p>	

ATTACHMENT B (April 2020)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
<p>April 2020 #1 C0980 MOD-00161 Regional Connector - Procure Medium Attenuation Fasteners In lieu of Standard Direct Fixation Rail Fasteners for the 2nd & Broadway Crossover</p>	<p>Regional Connector project is very unique because of all the existing historical buildings above the construction. Noise pollution has become a major concern for urban transit dwellers and authorities. The rule of thumb is a 10decibel technical increase in noise is heard by the human ear as "doubled" in loudness. When constructing underground for tunnels and stations the Environmental Impact Report must remember to always mitigate sound and vibration to protect the potentially impacted fragile surface buildings.</p> <p>The OIG recommends this scenario be written into the Lessons Learned file for future similar situations when constructing under historic or special case existing buildings.</p>	<p>The Regional Connector Project has extensive vibration mitigation elements included in the design where the operating guideway passes nearby sensitive receptors including recording studios, music venues and hotels. The project also requires that noise and vibration monitoring be performed during construction near sensitive facilities.</p> <p>The lesson learned and responded to in the referenced Contract Modification, is that information gathered during construction monitoring should be used to adjust the designed mitigations where field conditions indicate they are necessary.</p>	<p>Completed with issuance of subject contract modification. Equipment to be installed 3rd quarter 2020</p>
<p>April 2020 #2 C1045 MOD-00098 Purple Line Sect. 1 Additional Air Scrubbers at Fairfax Station</p>	<p>The OIG recommends further questioning to Southern California AQMD to determine why on a previous Metro construction contract (at the same location) they set the emission limit at 50 parts per billion, and the published standards are set at an emission limit of 30 parts per billion. On this contract the limits are set at 15 parts per billion. The inconsistency of the emissions limit should be taken under consideration and request in writing from AQMD why the standard emission limit could not be applied to this permit.</p> <p>The OIG further recommends in future construction pre-bid meetings, disclose to all potential contractors that the AQMD permit values necessary for the technical specification, "Temporary Construction Ventilation for Scrubber Units" has varied in the recent past and to verify the amount with an AQMD representative. If possible, a commitment needs to be obtained from AQMD by the contractor at the time of submission of a bid amount, that the standard is firm for a defined period.</p>	<p>The emissions limit for equipment was set at the time the Contractor submitted the specific ventilation plan to SCAQMD for permit.</p> <p>The SCAQMD does not have a set standard for hydrogen sulfide, but the states standard is 30 parts per billion. SCAQMD develops their requirements based on specific site conditions. Our EIR states Metro and its contractors will set and maintain work equipment and standards to meet SCAQMD standards.</p> <p>A letter will be sent to SCAQMD for clarification on how SCAQMD can consistently apply emissions regulations for hydrogen sulfide for Metro's future projects.</p>	
<p>April 2020 #3 C1120 MOD-00064 Purple Line Sect. 2 Geotechnical Instrumentation Installation and Monitoring AT&T and Beverly Hills High School</p>	<p>The OIG recommends that the independent estimator visit the field location concerning where the work for this change order will occur. The construction manager should walk the estimator though the scope of the changes for which they are developing a cost estimate. The independent estimate was a 126.7% lower than the negotiated price. Where such significant discrepancies in price estimates exist, either the estimator for Metro, or the estimator for the contractor needs to re-evaluate the scope of the change order.</p>	<p>Agreed. Moving forward the estimating group will endeavor to work even more closely with available subject matter experts to assure a thorough understanding of scope and of the engineering and construction processes involved.</p>	
<p>April 2020 #4 C1151 MOD-00001 Purple Line Sect. 3 Revise the Tail Track Exit Shaft Location from US Army Reserve to Veterans Affairs Property</p>	<p>If the Army Reserve location had been negotiated prior to the contract award, these amounts might have been included in the original bid, although the price then and now might have been the same for this different location.</p> <p>The OIG recommends Real estate arrangements should be negotiated as early as possible.</p>	<p>Metro agrees with the OIG's comment regarding the price of the change. The cost would roughly be the same whether it was negotiated prior to contract award or after award. We agree that real estate arrangements (agreements) should be negotiated as early as possible. The project-initiated contact with the property owner for the Exit Shaft property acquisition after the project was identified to be accelerated from the original 2035 Revenue Service Date. Metro did engage in talks with the VA early in the Project but obtaining VA approval to access their property has not been without a few challenges that Metro was able to overcome.</p>	

ATTACHMENT B (January 2020)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
Jan 2020 / #1 C0988-MOD-00437 Crenshaw/LAX UG1 (H2S) Ventilation Fans - Construction	none		
January 2020 #2 C0980 MOD-00154 Regional Connector - Acoustical Treatments for Areas Not on Finish Schedule	none		
January 2020 #3 C1045 MOD-00089 Purple Line Sect. 1 Development and On-Site Validation of the Selected Gas Mitigation Option for M13	<p>While the soil at every site is unique, it is possible to create a standard for testing soils for gasses. There is no current rule or technical specification within Metro criteria for extraction of CH₄ or H₂S from the soil.</p> <p>The OIG recommends after the final report is submitted by the contractor, that a technical specification for testing be developed and written into the MDRC to use in the future.</p>	<p>PLE1 Final M13 Mitigation Report will be forwarded to Metro Geotechnical Department for their review and further processing.</p>	
January 2020 #4 C1045 MOD-00090 Purple Line Sect. 1 Oil Well Investigation In Lieu of TBM Probe Ahead	<p>The implementation of the drilling and magnetometer survey from Section 1 has been incorporated into Purple Line Extension Section 2 and 3 contracts.</p> <p>The OIG recommends that the procedures implemented for locating tanks, pipes and other abandoned waste be added to the Lessons Learned database.</p> <p>The OIG further recommends that Metro evaluates whether to pursue recovery for waste removal costs under CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act, also known as Superfund. Passed in 1980). The OIG recommends that Metro's Engineering Program Management provide information on this matter to Metro's Legal department to assist in making this determination and potentially pursuing this recovery.</p>	<p>PLE1 implemented methodologies for locating known tanks, pipes and other abandoned waste will be added to the Lessons Learned database. PLE1 notes that the hazardous waste removal is relatively small/negligible compared with the overall volume of soil removed. After reviewing the potential ROI on pursuing legal actions against any potential responsible parties for cost recovery the current determination based on the available data is that it is not worth the effort and cost at this time. However, it was decided that Metro County Counsel would provide a preliminary review on the issue and it would be revisited in the future.</p>	

ATTACHMENT B (Oct 2019)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
<p>Oct. 2019 / #1 C0988-MOD-00432 Crenshaw/LAX - Update Station Customer Signage, Construction</p>	<p>The Metro RDC was updated with 2010 ADA Standards for Accessible Design later, and after the release and execution of the Crenshaw contract. When new standards are issued all request for proposal specifications pending after that date should be reviewed for correction before release when possible.</p> <p>For request for proposals released between 2010 and 2014, (when we changed the specification and Metro RDC) the OIG recommends immediate evaluation to determine if they were also awarded based on the old pre-2010 standards to determine whether their projects might be similarly impacted.</p>	<p>Agreed</p>	
<p>Oct. 2019 / #3 C1078 MOD-00083 Purple Line Sect. 1 - La Cienega Dewatering DSC</p>	<p>The Geotechnical Baseline Report stated that the ground conditions would permit drainage of water. The OIG questions if the consultant who developed the Geotechnical Baseline Report properly interpreted the boring data. Investigation is warranted to determine if the report accurately reflects the data.</p> <p>The OIG recommends recovering part of the cost, if the investigation demonstrates that the report was erroneous. The OIG further recommends future Geotechnical Baseline Reports should include interpretation of the borings to determine within a 95% confidence level the nature of the underlying soil and the location of the water table.</p>	<p>Project reviewed the GBR and actual field data and concludes this is a DSC. There is no error and omission on the part of the consultant.</p>	
<p>Oct. 2019 / #4 C1078 MOD-00085 Purple Line Sect. 1 - Geotechnical Instrumentation: Revise Geotechnical Contingency Plan and Reporting</p>	<p>The OIG recommends if Metro believes this change order is a betterment, then Metro should complete the new "Potential Notice of Betterment" form, submit a copy to LABOE and retain a copy for negotiations at the end of the contract if not sooner. This means Metro would move forward at LABOE expense. Going forward, this "Potential Notice of Betterment" form should be completed when applicable and submitted to the LABOE prior to agreeing to move forward, thus allowing the LABOE to make the decision if the betterment is truly necessary.</p>	<p>Project concurs and will develop a Potential Notice of Betterment for LABOE.</p>	

ATTACHMENT B (July 2019)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
<p>July 2019 / #1 C0988-MOD-00426 Crenshaw/LAX - Irrigation Water Meters, Park Mesa Medians</p>	<p>The OIG recommends this disagreement between the City of Los Angeles Public Works and LA Metro about the responsibility for the changes should be discussed and resolved.</p>	<p>This item is tied to the tree permit that included adding pavement in areas beyond the project limits, increasing the number of replacement of trees for those cut down, adding landscaped medians (which require the subject irrigation). All of the items above were discussed with City and the two parties agreed to an MOU for which the City would be paid 3.5 million to pave the street (work valued at 7.0 million plus) and that this agreement resolved the other issues mentioned above with Metro installing at its cost (medians, trees...etc.)</p>	
<p>July 2019 / #2 C0980 MOD-00141.2 Regional Connector - Impacts to Support of Excavation: Decking, Utilities and Temporary Drainage</p>	<p>The OIG recognizes the age of the buildings at the site and errors of definitive drawings.</p> <p>The OIG recommends to research on the front end, even drawings to confirm accuracy, to preclude issuing an expensive change order after construction has commenced.</p>	<p>There are definitely some lessons to be applied to future projects based on Regional Connector's experience with utilities. The most Signiant finding is the need to conduct utility condition assessments in areas where cut-and -cover construction is planned. This could be accomplished by a combination of potholing, inspection of maintenance holes/vaults and research with the utility owner. The documented age of the utility and the presence of large masonry vaults/maintenance holes, should serve as guides in the determination of whether facilities should be replaced.</p>	<p>No further action by Regional Connector</p>
<p>July 2019 / #3 C1078 MOD-00025 Purple Line Sect. 1 - Revised Low Impact Development (LID)</p>	<p>The OIG recommends that all upcoming sites where known industrial and railway activity occurred, that a full investigation of soils occurs and is stated in the Environmental Impact Statement. Performing such investigation early may result in additional early costs, but these circumstances will then become known costs of the project and may be prepared with less delay and less costs than waiting.</p>	<p>Site investigation and soil remediation was completed prior to the construction of the site. However, the original plan for the DTSC directed site cleanup was the previous owner's responsibility. Due to the nature in how this property was eventually acquired in order to meet the construction schedule (imminent domain) there was no time to clean up the groundwater issues prior to LID designs. and assess any data gaps that may have existed. Orders from the DTSC to continue remediation efforts of the groundwater, beyond Metro's planned clean up phase, pushed the environmental effort beyond a clear end date which in effect conflicted with the LID design since it would be predicted to pushing an identified contaminated groundwater plume during rain events once completed. In the future, if Metro can anticipate action to be required from outside entities (that can take significant time to develop and execute) beyond the initial environmental phase, it will request contractor to change the design prior to 60% completion to avoid major changes</p>	
<p>July 2019 / #4 MC1120 MOD-00037 Purple Line Sect. 2 - Revision to Avg Depth of Seismic Borings along Wilshire Blvd. on Tunnel Reach 5</p>	<p>The OIG commends the Engineering department for taking supplementary steps to determine additional the location of seismic fault line in relation to the track alignment for improved safety and long-term structural integrity.</p>	<p>Noted</p>	<p>N/A</p>

ATTACHMENT B (April 2019)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
<p>April 2019 / #1 C0988 MOD-00402 Crenshaw/LAX - Provisional Payments - Pending Dispute Resolution Fire Rated Cable (multiple) Change Orders</p>	<p>1. The OIG recommends that Metro expeditiously and fairly resolve the litigation with the Contractor. 2. The OIG further recommends that a review team monitor the billings of the Contractor to validate the efficacy of the incentive program as this may become a tool for improving future performance on other projects.</p>	<p>1. Agree, different mechanisms to achieve this being considered. 2. Agree, already being implemented.</p>	<p>1. December 2019 2. Closed</p>
<p>April 2019 / #3 C1045 MOD-00071 Purple Line Sect. 1 - Golder Gas Investigation and Report</p>	<p>The Independent Cost Estimate was not an accurate representation of work stated in the agreed upon scope of work. The OIG recommends that Metro continue to follow through on the plan for mitigation of gas migration utilizing the Contractor's new report of procedures where known high concentrations of hydrogen sulfide and methane gases exist.</p>	<p>Metro is following thru on the plan. Installation of wells for field testing began in 3/19. The mitigation options draft memo, based on the field-testing observations, was received 6/25. Design of a selected gas migration mitigation option, i.e. increasing the number of soil vapor extraction wells, is ongoing.</p>	<p>Completion of mitigation recommendation and implementation, is tentatively scheduled for December 31, 2019.</p>
<p>April 2019 / #4 C1045 MOD-00072 Purple Line Sect. 1 - Reach 3 Additional Gas Testing and Assessment</p>	<p>The OIG recommends: 1. In following the new Contractor's report, Work Plan for Exploratory Program to Assess Mitigations for Potential Gas Migration, a. Record all steps that were successful and those that need modification. b. Have information formatted and add to Technical Specifications. c. Have steps and procedures added into Lessons Learned d. Incorporate these finding and procedures into any future bid process where potential gas migration and tunnel boring may occur. 2. Note under Lessons Learned where known high concentrations of hydrogen sulfide and methane gases exist, prior study and geotechnical investigation be completed and included in the bid documents.</p>	<p>1. Metro has the following comments: a. Plan to record this. Modifications to the testing program in field to be made as appropriate b. This is likely a unique area. A Full report on the program and recommendations is included in the work. Pending the outcome, Technical Specifications would be developed for the Project c. Agree, also see b above d. We note that investigation is in progress now to study gas migrations. Pending outcome, future bid process would include results, including incorporation in Geotechnical Investigation and Technical Requirements 2. Agree. In this instance the area was studied and fully identified/described in the bid documents. Also see 'b' above.</p>	<p>12/31/2019</p>

ATTACHMENT B (April 2019)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
<p>April 2019 / #5 C1045 MOD-00074 Purple Line Sect. 1 - Additional Instrumentation (Project Wide) as requested by LABOE and STS EOR</p>	<p>The OIG recommends that instrumentation bought for this project become property of LA Metro, so that future projects (remainder of the Purple Line Extension 2 and 3) will have instrumentation on hand to immediately install when Support of Excavation for those projects begin.</p>	<p>Metro has made several attempts in the past for Purple Line and Regional to salvage and reuse geotechnical instrumentation. However, passing the instruments between projects offer a number of challenges. These include the following:</p> <ul style="list-style-type: none"> • The Design life of instrumentation equipment is limited given the temporary nature of the work. • Given the diminished value of the used instrumentation equipment it is often abandoned in place. An effort to salvage the equipment may result in increased costs. • The means, methods and performance of shoring, instrumentation and monitoring are left with the Design-builder. Dictating the used instruments would interfere with the selection of means and methods and make Metro responsible for warranting the equipment for the life of the project. • The technology associated with the equipment continues to evolve. Metro may then be obligating the contractor to use obsolete equipment. • Timing and turnover of instrumentation. The contract schedules for Regional, Crenshaw and Purple Line Sections 1, 2 and 3 all overlap. As such, the instrumentation for each project is needed at the same time. • Metro would need to inventory and temporary store the instrumentation equipment. There is a risk that Metro may be storing the equipment permanently or Metro may need to make efforts for their disposal. 	<p>Closed</p>

ATTACHMENT B (Jan. 2019)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
Jan 2019 / #1 C0988 MOD 00335.1 Crenshaw - Cable Transmission System Update - Construction	"The OIG recommends: The schedule negotiations with the contractor be expeditiously concluded so the schedule impacts are minimized."	Not sure what this means. CO's were issued prior to MOD that obligated the contract to commence work - this mitigated schedule impacts. Response could stay as-is I suppose (with edits) as it is relatively benign in nature	Closed
Jan 2019 / #3 C1120 MOD-00026 Purple Line Sect. 2 - Santa Monica Blvd. Bus Layover Design and Construction Changes	The OIG recommends: That Operations and LADOT be provided the scope of work after requests are submitted or "no comments" are received to confirm their requests have been added into the scope prior to the release of the RFP.	Because the OIG's recommendation is for actions to be taken prior to the release of RFPs, it has been passed on to Metro Engineering for consideration in revising Policy DSGN01 DB for future projects.	Metro Engineering (Androush Danielians/ Eduardo Cervantes) have been notified. They provided the below comment: A process will be set in place that will be included in future Specs and contract language for the PE Consultant. The process will require the consultant to submit plans to all applicable agencies (including Metro). Upon receiving comments, the Consultant shall address each comment as to the disposition in a matrix/spreadsheet. The spreadsheet / matrix will then be submitted to each of the commenting agencies. That agency will then be requested to accept the project disposition (via an initial). If the agency is not in acceptance of the disposition, the Consultant via the Project shall work with each agency until that comment disposition is accepted. The final signed off matrix shall then be included in the RFP for the DB (contractor) to complete the path forward based on the agreed upon disposition.

ATTACHMENT B (Oct. 2018)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
Oct 2018 / #1 C0988-MOD-00347.2 Crenshaw - UG1 Center Walkway Lighted Handrail	The OIG recommends: Management should note the steps and procedures in Lessons Learned and follow up during management group discussions, on ways to expedite and coordinate future situations involving evaluation of numerous options to quickly reach a best alternative.	Agree noted - this was a unique and complex issue needing evaluation and testing of different option prior to selection and moving forward. Process used now accounts for this.	Closed - Will incorporate the suggested comment into lessons learned to be used in future projects.
Oct 2018 / #2 C1045 MOD-00060 Purple Line Sect. 1 - Accommodate COBH Memorandum of Agreement	The OIG recommends: To start future MOA processes with cities during the planning stages of the Environmental Assessment and identify the concerns/matters relating to the MOA in the Risk Registry.	Agree	Per the PM's comments Planning needs to close this item. Planning (Manjeet Ranu) was informed on 04/05/19 and is supposed to provide comments by the end of April 2019.
Oct 2018 / #3 C1045 MOD-00061 Purple Line Sect. 1 - Addl. SOE design work for LA Brea Station due to deviation request for bldg. settlement	The OIG recommends: This matter concerning dewatering and SOE be added to the Lessons Learned files and the separation of dewatering and SOE be updated in the Metro Design Criteria as a special case.	Agree	Closed - Per the PM's comments Project responded to the concern, but Gateway Engineering needs to close this issue. Engineering (Androush Danielians) has been notified and responded that the related MRDC has been previously revised.
Oct 2018 / #4 C1045 MOD-00058 Purple Line Sect. 1 - LA Brea Additional Instrumentation	The Independent Cost Estimate was not an accurate representation of work stated in the agreed upon scope of work. The OIG recommends: The project manager or knowledgeable person from the project team, establishes a coordination meeting both in the field and office for the estimator to see and hear each detail of new scope of work. Hearing and visualization of the scope changes will assist the estimator in preparing a more accurate Independent Cost Estimate.	Agree, The Estimator will continue to be invited to the Fact Finding with the Contractor as identified in CF-14"	Closed - Staff is being invited as stated in the response.
Oct 2018 / #5 C1120-MOD-00015 Purple Line Sect. 2 - Century City Constellation Station Main Entrance Final Design	The OIG understands the real estate transaction between the developer and Metro is not a signed agreement as of the time of this report. The OIG recommends: Metro management and Metro real estate staff work expeditiously with the developer to finalize cost estimates and complete the real estate transaction to minimize the likelihood of additional costs associated with further modifications to the design of the station entrance.	Agree	Closed - Ongoing Process.

ATTACHMENT B (July 2018)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
July 2018 / #1 C0988-MOD-00173.4 Crenshaw - Fire rated conduit and cable for tunnel emergency lighting	The OIG recommendation is to: 1) update the Metro Specifications to list the change in the standards and to include the list of approved alternatives from Metro Fire Life and Safety group 2) continue to follow appropriate process to resolve the Change Order dispute.	1- Agree as appropriate 2- Agree	1- Closed - was updated in next project, Regional Connector. 2- Closed
July 2018 / #2 C0988-CO-00209.1 Crenshaw - Preliminary 45-day acceleration	The OIG recommends Metro continue to explore with the contractor opportunities to accomplish schedule recovery.	Agree	Closed
July 2018 / #3 C0988-MOD-00354 Crenshaw - COLA request to replace concrete street light & signal poles w/steel poles- MLK area	This modification might be considered a 'Betterment' and recommend that consideration of a similar value be negotiated with the City to offset this cost in connection with this project.	Agree - Under consideration	Closed
July 2018 / #5 C0980-MOD-00119 Regional Connector - Addl Special conditions CAL/OSHA Tunnel classification	OIG recommends that during coordination meetings, between project management of Regional Connector and of Westside Purple Line Extensions 1, 2 & 3, communicate Lessons Learned concerning gas emissions monitoring when tunneling in this region to ensure timely notification and coordination with Cal/OSHA once a notifiable event occurs.	Agree - Regional Connector will share lesson learned with respect to gas detection and OSHA notification protocol with Purple Line Projects 1,2 & 3.	Closed - Discussed with Project Managers in the meeting held on Nov 13, 2018.

ATTACHMENT B (July 2018)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
<p>July 2018 / #6 C1120-MOD-00011 Purple Line sect. 2 - Temp K-rail Noise Barrier</p>	<p>1) The OIG recommends for work activities along an open city street (center of roadway) to add the option into future Scopes of Work to consider use of plywood barrier panels set into K-Rail when noise and working hours are extraordinary factors versus chain link fence with screens and sound blankets.</p> <p>2) Plywood panels set into K-Rail enable longer working hours as compared to the standard traffic cones. This form of traffic control can also be set up and left in place during long work periods. The OIG recommends writing into Metro's Standard Specifications, for long duration activities, the option of utilizing plywood barriers set into K-Rail for traffic control plans to maximize the work hours and assist in traffic control.</p> <p>3) The OIG further recommends that, this form of barrier be recorded in Lessons Learned and considered for the Westside Purple Line Extension Section 3. Program Management may consider it in meetings between Section 2 and Section 3 to share Lessons Learned.</p>	<p>(1) The use of traffic control measures is governed by the municipality in which work is occurring. Both K-rail with plywood and chain link fence with screening are already contractually allowed, and considered appropriate installations in the proper application. Future projects will consider the use of each barrier system on a case by case basis, considering actual traffic impacts and the proximity to commercial and residential properties.</p> <p>(2) Work hours in streets are governed by the municipality in which the work is occurring (and often time by the City Councilmember representing the district where the work is being performed). For future applications with long duration activities, and when approved by the municipality having jurisdiction, K-rail with plywood will be considered to maximize work hours.</p> <p>(3) Lessons learned from AUR work on the WPLE2 project will be documented for consideration by future projects. The WPLE3 project considered the use of k-rail barriers for AUR work, but because of the significant traffic during daytime hours, AUR work has been limited to nighttime hours by LADOT (municipal agency having jurisdiction), with a requirement to fully restore travel lanes during daytime hours. A k-rail barrier system cannot be feasibly moved on the street at the start of a shift and removed at the end. Therefore, it was not practical to utilize k-rail barriers.</p>	<p>Lessons learned from AUR work on the WPLE2 project will be documented for consideration by future projects by the end of FY19.</p>

ATTACHMENT B (July 2018)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
<p>July 2018 / #7 C1120-MOD-00012 Purple Line Sect. 2 - Oil Abatement at launch box CCC Station</p>	<p>This is a potential CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act, also known as Superfund. Passed in 1980) remediation that Metro should evaluate and pursue if appropriate to recover funds from the previous property owners. Metro may be entitled to proceed against the previous line of owners and recover damages for the clean-up of the abandoned oil pipelines that are asbestos lined causing the pollution. The OIG recommends that Metro's Engineering Program Management provide information on this matter to allow Metro's Legal department to assist in making this determination.</p>	<p>The Project is actively coordinating with Kathleen Dougherty from County counsel to determine if Superfund legislation provisions can be used to pursue cost reimbursement for the extra work.</p>	<p>The Project is actively coordinating with Kathleen Dougherty from County counsel to determine if Superfund legislation provisions can be used to pursue cost reimbursement for the extra work.</p>

ATTACHMENT B (May 2018)

OIG REPORT/ SPOT CHECK # MOD # Description	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
<p align="center">May 2018 / #1 C0988-MOD-00345 Crenshaw - Oil Water Separator at UG Stations</p>	<p>The Metro rail design criteria (MRDC) was updated on October 31, 2017, to reflect the addition of the elevator, escalator pit drain and underground station track drains to be processed through a clarifier to remove oil, grease, and sand. Metro management should:</p> <ol style="list-style-type: none"> 1. Update the "Lessons Learned" files regarding the OWS change to the MRDC and communicate the lesson to other Project Managers working major transit construction projects (This is consistent with recommendation 51 and 89p in the OIG's Construction Management Best Practices Study.). 2. Investigate this change to determine: <ol style="list-style-type: none"> a) If the scope of work of other major transit construction projects require this design update for the OWS. b) If the Regional Connector and the Westside Purple Line Extension sections 1, 2, and 3 should be amended for the same OWS omission to reduce additional change orders and costs. c) When should have the City been provided this information and reviewed construction plans prior to the cement being poured to avoid redesign costs? 	<p>the primary driver to the change is that the Metro criteria does not stipulate the percentage level of contaminants that should be expected to design the OWS system. Since none was provided then the contractor assumed the minimum and therefore, designed a system that did not require OWS. since the percentage of contaminants were of the level to need and OWS then this triggered there was a need for a redesign...etc.</p>	<p>Closed - Will incorporate the suggested comments into lessons learned to be used in future projects.</p>
<p align="center">May 2018 / #3 C1078-MOD-00011 Purple Sect 1 - Schdl Impacts from Arcadis Work/change to accommodate const schdl extension from site impacts</p>	<p>All Environmental Site Assessments were performed prior to excavation. No record of underground tanks or buried reinforced concrete slabs were found by the Department of Conservation and Division of Oil, Gas, and Geothermal Resources (DOGGR). However, based on lessons learned from this site, Metro management should:</p> <ol style="list-style-type: none"> 1. Conduct Ultrasonic Soil Examinations at future questionable sites to attempt to avoid unidentified hazards. This is consistent with recommendations (88b, 88c, and 88d) in the OIG's report on Capital Project Construction Management Best Practices Study (February 29, 2016). 2. Perform research to determine who could have installed the tanks and buried reinforced concrete slabs, and provide this information to the LA Metro Legal department for consideration of possible legal action to recover the cost of remediation under the Comprehensive Environmental Response, Compensations and Liability Act of 1980 (CERCLA). 3. Perform an assessment of the schedule to determine if any recovery of time is possible. 	<p>Agree, but please note that as with all major capital construction projects, every effort is made to exercise due diligence and to ensure consistent and comprehensive investigations in identifying underground issues by use of Phase I ESAs, Phase II ESA (if recommended) under the guidance and direction of Metro's Environmental Staff and the use of Ground Penetrating Radar (GPR) in order to attempt to identify these conditions prior to bid. An exhaustive investigation is not cost or schedule prohibitive, however further effort on identifying the existing Oil and Gas Wells through DOGGR may be warranted. Also, to note: COLA does not have design drawings of all underground tanks. There are no as built drawings for the various Tar Collection Sumps located on the Westside of LA.</p>	<p>Closed - Lessons learned are to apply more resources to upfront identification of potential unforeseen underground issues such as DOGGR wells, USTS identified in the initial Phase I and II, GBR and EDR Reports.</p>

ATTACHMENT B (May 2018)

OIG REPORT/ SPOT CHECK # MOD # Description	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
<p align="center"> May 2018 / #4 C1120-MOD-00002 Purple Sect 2 - Worksite Traffic Control for AUR </p>	<p>Metro management should:</p> <ol style="list-style-type: none"> 1. Establish a single party to serve as a “clearinghouse” for all utility’s relocations during construction. The “clearinghouse” could be assumed by the Metro group, Third Party Administration. (This is consistent with recommendations 80, 88, 89, 89j, 89n, and 89v in the OIG’s report on Capital Project Construction Management Best Practices Study.) 2. Utilize the “clearinghouse” process to improve the Advance Utility Relocations. (Consistent with recommendations 79, 83, 87, 89b, 89c, 89d, 89g, 89h, 89s, and 89t in the Best Practices Study.) 3. Create “Lessons Learned” for the establishment of a single clearinghouse in the initial scope of work for the Design Build Contractor to avoid future costly change orders. (This is consistent with recommendation 89p in the Best Practices Study.) 	<p>Point of clarification: 'Worksite Traffic Control for AUR' was CO No. 2, not MOD-002. The unilateral change order was later negotiated and issued as MOD 10.</p> <p>Response: consistent with OIG's " Capital Project Construction Management Best Practices Study", the WPLE Project established and utilized a single point of contact for advanced utility relocations outside of the scope of the DB contracts. This group is led by Metro Third Party coordinators, engineering resources, and construction management consultants.</p> <p>Program Management agrees with the recommendations in the Best Practices Study, however this MOD was specific to a project decision on how to handle the implementation of traffic control for two third party utilities that the Project needed to work simultaneously to mitigate a delay caused by the Beverly Hills City Council delaying the start of construction.</p> <p>This Modification to the C-1120 contract is not extra work to the Project. This work was budgeted and originally expected to be performed by the individual AUR companies and reimbursed by the Project. The Project moved this work into the C1120 contract, by Modification, in order to expedite the AUR construction work which was successful. This work was necessary regardless of which entity performed it. Compensating the DB for this work eliminated compensation to the AUR companies for this work, and allowed SCE and the Gas Company to work simultaneously.</p>	<p>Closed</p> <p>Creation of Clearinghouse was already completed for WPLE2. Future projects will address this matter during Preliminary Engineering.</p> <p>Lessons learned from AUR work on the WPLE2 project will be documented for consideration by future projects by the end of FY19.</p>

File #
2024-1075

Office of Inspector General Construction Change Order Spot Check Report

Presented By
Karen Gorman
Inspector General

January 2025
Construction Committee
Los Angeles County Metropolitan Transportation Authority



Spot Checks 1 & 2

1 - Airport Metro Connector 96th St. Transit Station Project

Excessive Deflection of (LRT) Roof.

Recommendation:

Award: \$833,373

The OIG recommends continuing to streamline future adjustments and implementing engineering controls and monitoring systems to detect anomalies early in the project lifecycle.

2 – Purple Line Extension Section 2 Transit Project

Unforeseen Conditions of Sewer in Critical Path.

Recommendation:

Award: \$1,670,988

None

Spot Checks 3 & 4

3 – Purple Line Extension 1 Transit Station Project

Wilshire/La Brea Station Plaza Standby Generator and Load Bank Procurement.

Recommendation:

Award: \$2,324,954

None

4 – Airport Metro Connector 96th St. Transit Station Project

Improvements of the North-end Perimeter Site Fencing

Recommendation:

Award: \$1,134,517

None

Spot Check Schedule Comparison

Project	Title of Change Order	Time Saved Executed date to Board Mtg.	New Delegated Process final SOW to Executed date.	Former Board Approval Process
Airport Metro Connector 96 th St. Transit Station	Excessive Deflection of (LRT) Roof	53	17	70
Purple Line Extension Section 2 Transit Project	Unforeseen Conditions of Sewer Line	57	9	66
Purple Line Extension Section 1 Transit Project	Wilshire/La Brea Station Plaza Standby Generator and Load Bank Procurement.	48	7	55
Airport Metro Connector 96th St. Transit Station	Improvements of the North-end Perimeter Site Fencing.	39	12	51