THE NORTH SANTA MONICA BOULEVARD RECONSTRUCTION PROJECT

CITY OF BEVERLY HILLS

BID ADDENDUM NO. 2

ADDENDUM NO. 2 for the above referenced project hereby modifies the bid documents, as follows:

Addendum Items:

Addendum Item 2.1. Changes to Notice to Bidders

Item a. The date sealed proposals are due to the City of Beverly Hills has been changed from June 2, 2016 to June 9, 2016.

Item b. The bid items and quantities listed in the Notice to Bidders were updated to be consistent with other changes listed in Addendum 1 and 2.

Addendum Item 2.2. Changes to Proposal Form

Item a. Item 8, Provide Traffic Services Officers (Allowance)

The total dollar amount for this allowance shall be $300,000

Item b. Item 26, Install Crushed Miscellaneous Base (CMB).

Change quantity from 38,450 TON to **49,250** TON

Item c. Item 27

<u>Delete:</u>

Install Cement Treated Base (As Needed)

<u>Replace with:</u>

Remove and Dispose of Unsuitable Material

Estimated Quantity = 5,600 CY

Item d. Add Item 61: Water Pipe Relocation 12"

Estimated Quantity = 100 LF

Item e. Add Item 62: Water Pipe Relocation 8"

Estimated Quantity = 100 LF

Addendum Item 2.3. Change to Section 2-01 Time of Completion and Liquidated Damages

<u>Delete:</u>

The work on this project shall start within 7 calendar days from the date of receipt of written notice to proceed from the City Engineer and the Contractor agrees to complete the entire work within 540 working days from Notice to Proceed.

Replace with:

The work on this project shall start within 7 calendar days from the date of receipt of written notice to proceed from the City Engineer and the Contractor agrees to complete the entire work within **540 calendar days** from Notice to Proceed.

Addendum Item 2.4. Change to Section 2-03.1.c Special Work Requirements

Delete:

All excavations including but not limited to streets, driveways, and alleys must be plated, cleaned up and ready for traffic at the end of each workday, unless otherwise allowed by the City Engineer.

Replace with:

The Contractor must maintain a safe, tidy, and accessible path of travel for pedestrians at all times.

Addendum Item 2.5. Change to Section 2-12.4 Item 4. Tool Box Traffic Control Installations

Delete:

B. Advance Warning Message Board - Provide Message Board (PCMS) MB-1548, 76" x 126", LED Full Matrix, or equivalent, including 2 month maintenance.

Replace with:

B. Advance Warning Message Board - Provide Message Board (PCMS) MB-1548, 76" x 126", LED Full Matrix, or equivalent, including 6 month maintenance.

Addendum Item 2.6. Change to Section 2-12.8 Item 8. Provide Traffic Services Officers (Allowance)

Add at the end of the section:

This allowance shall be set at $300,000.

Addendum Item 2.7. Change to Section 2-12.21 Item 21. Remove and Dispose of Existing Base, Subbase, and Other Unclassified Materials

Delete:

Under item 21, the unit price per cubic yard shall include the cost of labor, material and equipment required for removal of base and subbase material, haul away, dump fees and all appurtenant work along the project limits identified in Drawing No. 7449.

Replace with:

Under item 21, the unit price per **square feet** shall include the cost of labor, material and equipment required for removal of base and subbase material, haul away, dump fees and all appurtenant work along the project limits identified in Drawing No. 7449.

Addendum Item 2.8. **Change to Section 2-12.24 Item 24. Constructed Vegetated Bioswale (Including Underdrain)**

Delete:

2-12.24 ITEM 24. CONSTRUCT VEGETATED BIOSWALE (INCLUDING UNDERDRAIN) – Under item 24, the unit bid item per linear foot shall include the cost of material, equipment, removal, and disposal of existing interfering structures, tree roots along the project limits in Drawing 7449 and in accordance with Section 3-16 of these Specifications. The work under this item shall include labor, excavation, compaction, transport, and sodding of lawns that have been damaged or removed and cover with suitable mulch, as needed.

Protection of existing street lights, traffic signals, traffic signal and street lighting conduits, fiber optic conduits, ornament light conduits, irrigation lines, shallow water service lines and curb drains. Any damage to curb drains, irrigation lines/ and or sprinkler heads shall be replaced in kind within 48 hours of obstruction.

Removal and relocation of any obstruction to the work such as street signs, newspaper racks, water meter boxes, utility boxes and vaults. If the Contractor has not used reasonable care in protecting any of the obstruction, full replacement at no additional cost to the City.

Replace with:

2-12.24 ITEM 24. CONSTRUCT VEGETATED BIOSWALE (INCLUDING UNDERDRAIN) – Under item 24, the unit bid item per linear foot shall include the cost of material, equipment, removal, and disposal of existing interfering structures, tree roots along the project limits in Drawing 7449 and in accordance with Sections 15639, 320190, 321313, 321400, 328400, 329113, and 329300 of these Specifications. The work under this item shall include labor, excavation, compaction, transport, planting, irrigation, flatwork, mulching and sodding of lawns that have been damaged or removed due to construction activities.

a) Protection of existing trees, street lights, traffic signals, traffic signal and street lighting conduits, fiber optic conduits, ornament light conduits, irrigation lines, shallow water service lines and curb drains. Any damage to curb drains, irrigation lines/ and or sprinkler heads and irrigation equipment shall be replaced in kind within 48 hours of obstruction.

b) Removal and relocation of any obstruction to the work such as street signs, newspaper racks, water meter boxes, utility boxes and vaults. If the Contractor has not used reasonable care in protecting any of the obstruction, full replacement at no additional cost to the City.

c) Trenching, backfill and installation of irrigation equipment and materials. Material being use: drip irrigation tubing, brass valves with battery operated controller, flash valves, air/vacuum relief vent valves, quick couplers, and connection to existing mainline, purple piping for reclaimed water (future use), and marking tape per the County Health Department requirements. Contractor to relocate existing heads north of the new mow curb and provide proper coverage to existing turf. Submittals of equipment and materials.

d) Excavation, backfill and installation of plant material such as shrubs, groundcover and grasses. Clearing and grubbing, fertilizing tablets, bioswale backfill, mulching of all planting areas. Replacement of sod to all exiting turf areas damaged due to construction activities. Contractor will need to consult with the City's Forestry manager for review and approval of any trees that may be impacted by the construction of the bioswale. Tree protection of all existing trees. Contractor shall make allowance of an additional 20% of shrubs, groudcover and grasses for in-filled to be placed on site by the landscape architect. Contractor to provide submittals for plant material to landscape architect for review and approval.

e) Trenching and pour-in-place concrete of 4" thick. mow curb. Integral color from Davis Color to be used for the mow curb and stepping stone. Unit pavers will be thin set on concrete base and located at each curb cut. 3"thick crushed stone (1-3" in size) located at the bottom of the bioswale (locations per drawings and details). Contractor to provide crushed stone quantities for proper coverage. 18" square maintenance concrete stepping stone one at each curb cut. Contractor shall submit samples for review and approval.

Addendum Item 2.9. Change to Section 2-12.27 Item 27

Delete:

2-12.27 ITEM 27. CEMENT TREATED BASE (AS NEEDED) –Under item 27, the unit bid item per square foot and shall include the cost of labor, material and equipment for mixing the cement into the top 11.5'' of subbase material, spreading the material, compacting and trimming to the proper grade as needed where soil is discovered to be unsuitable. Contractor shall provide temporary driveways access, compliance with the phasing restrictions and as specified herein to complete the work. No extra costs shall be allowed.

Replace with:

2-12.27 ITEM 27. REMOVE AND DISPOSE OF UNSUITABLE MATERIAL - Under item 27, the unit bid item per Cubic Yard shall include the cost of labor, material, equipment and transport required for removal and disposal of unsuitable material. If unsuitable material is found, the Contractor shall remove said material to the limits to be determined by the Engineer and shall replace said material with select fill or base material, as to be determined by the Engineer. The quantity of excavated unsuitable material shall be measured in place and based on the actual removal area and depth. This item shall also include the cost of protecting in place existing utilities. The payment for the fill material (base material) shall be per item 26.

Addendum Item 2.10. Change to Section 2-12.43 Item 43. Remove and Construct Curb Opening Catch Basin

Delete:

Under Item 43, the unit price bid per each shall include the cost for all removal and disposal of existing interfering structures including tree roots, concrete, curb and gutter, soil, and existing curb opening catch basin along the project limits in Drawing No. 7449 and in accordance with Section 3 of these Specifications and

Standard Plans for Public Works Construction Standard Plan 300-3 in Appendix B. The cost for monolithic catch basin connections in accordance with SPPWC standard plan 308-2 shall be considered incidental and no additional payment shall be made therefore. The work under this item shall include labor, excavation, fill, steel reinforcement for concrete, manhole frame and cover, and installation of United Storm Water Automatic Retractable Screen A.R.S. Wing-Gate or approved equal. See Section 3-12 of these Specifications and Appendix D for manufacturers drawing.

Replace with:

Under Item 43, the unit price bid per each shall include the cost for all removal and disposal of existing interfering structures including tree roots, concrete, curb and gutter, soil, and existing curb opening catch basins along the project limits in Drawing No. 7449. It shall include the construction of a new catch basin in accordance with Standard Plans for Public Works Construction Standard Plan 300-3 in Appendix B. The cost for monolithic catch basin connections in accordance with SPPWC standard plan 308-2 shall be considered incidental and no additional payment shall be made therefore. The work under this item shall include labor, excavation, fill, steel reinforcement for concrete, manhole frame and cover, and installation of Connector Pipe Screen (CPS) and Automatic Retractable Screen (ARS) Wing-Gate by United Storm Water or approved equal. See Section 3-12 of these Specifications and Appendix D for manufacturers drawing.

Addendum Item 2.11. Change to Section 2-12.44 Item 44. Remove and Construct Curb Opening Catch Basin with Grating

Delete:

Under Item 44, the unit price bid per each shall include the cost for all removal and disposal of existing interfering structures including tree roots, concrete, curb and gutter, soil, and existing curb opening catch basin along the project limits in Drawing No. 7449 and in accordance with Section 3 of these Specifications and Standard Plans for Public Works Construction Standard Plan 302-3 in Appendix B. The cost for monolithic catch basin connections in accordance with SPPWC standard plan 308-2 shall be considered incidental and no additional payment shall be made therefore. The work under this item shall include labor, excavation, fill, steel reinforcement for concrete, manhole frame and cover, and installation of United Storm Water Automatic Retractable Screen A.R.S. Wing-Gate or approved equal. See Section 3-12 of these Specifications and Appendix D for manufacturers drawing.

Replace with:

Under Item 44, the unit price bid per each shall include the cost for all removal and disposal of existing interfering structures including tree roots, concrete, curb and gutter, soil, and existing curb opening catch basin along the project limits in Drawing No. 7449. It shall include the construction of a new catch basin in accordance with Standard Plans for Public Works Construction Standard Plan 302-3 in Appendix B. The cost for monolithic catch basin connections in accordance with SPPWC standard plan 308-2 shall be considered incidental and no additional payment shall be made therefore. The work under this item shall include labor,

excavation, fill, steel reinforcement for concrete, manhole frame and cover, and installation of Connector Pipe Screen (CPS) and Automatic Retractable Screen (ARS) Wing-Gate by United Storm Water or approved equal. See Section 3-12 of these Specifications and Appendix D for manufacturers drawing.

Addendum Item 2.12. Change to Section 2-12.57 Item 57. Street Lighting System

Delete:

2-12.57 ITEM 57. STREET LIGHTING SYSTEM – Under Item 57, the unit price bid per lump sum shall include full compensation for furnishing all labor, L.E.D. luminaires, decorative poles, conduits, conductors, service enclosures, pull boxes, circuit breakers, tools, equipment, and incidentals and for doing all the work involved in furnishing and installing street lighting complete in place as shown on the Plans and as specified in the Reference Standards, and specified herein. Existing lighting coverage shall be maintained at all times within the project limits. It is the responsibility of the Contractor to determine the work and material required to provide adequate temporary lighting.

Replace with:

2-12.57 ITEM 57. STREET LIGHTING SYSTEM – Under Item 57, the unit price bid per lump sum shall include full compensation for furnishing all labor, L.E.D. luminaires, decorative poles, conduits, conductors, service enclosures, pull boxes, circuit breakers, tools, equipment, and incidentals and for doing all the work involved in furnishing and installing street lighting complete in place as shown on the Street Lighting Plans and as specified in the Reference Standards, and specified herein. Vacant conduits as part of this project shall be fitted with pull-rope and endcaps. Existing lighting coverage shall be maintained at all times within the project limits. It is the responsibility of the Contractor to determine the work and material required to provide adequate temporary lighting.

Addendum Item 2.13. Addition of Section 2-12.61 Item 61. Water Pipe Relocation 12"

2-12.61 ITEM 61. WATER MAIN RELOCATION – Under Item 61, the unit price per linear feet shall include all labor, equipment, sawcutting, excavation, thrust blocks, pipe fittings, furnishing and laying 12" ductile iron pipe, bedding, backfill, concrete work, landscaping, and materials for all work involved for the relocation of water pipes conflicting with catch basins, storm drains, and other items installed as a part of this project. The cost shall also include testing, chlorination, and reconnection to the existing water pipe at either end. For the basis of this bid, the Contractor shall assume that there will be four separate relocations, each with its own mobilization effort. This work shall be consistent with Detail 1 on the Civil Detail Sheet, page 46 of 84.

The unit price for Water Pipe Relocation 12" bid item shall be valid regardless of the actual amount involved, and shall not be subject to the quantity change (decrease or increase) limitations detailed in SSPWC 3-2.2.

The Contractor shall identify and pothole all utilities prior to beginning of this work. It shall be the responsibility and liability of the Contractor to determine the existence or non-existence of such utilities and to protect them from damage at all times.

Addendum Item 2.14. Addition of Section 2-12.62 Item 62 Water Pipe Relocation 8"

2-12.61 ITEM 61. WATER MAIN RELOCATION – Under Item 61, the unit price per linear feet shall include all labor, equipment, sawcutting, excavation, thrust blocks, pipe fittings, furnishing and laying 8" ductile iron pipe, bedding, backfill, concrete work, landscaping, and materials for all work involved for the relocation of water pipes conflicting with catch basins, storm drains, and other items installed as a part of this project. The cost shall also include testing, chlorination, and reconnection to the existing water pipe at either end. For the basis of this bid, the Contractor shall assume that there will be four separate relocations, each with its own mobilization effort. This work shall be consistent with Detail 1 on the Civil Detail Sheet, page 46 of 84.

The unit price for Water Pipe Relocation 8" bid item shall be valid regardless of the actual amount involved, and shall not be subject to the quantity change (decrease or increase) limitations detailed in SSPWC 3-2.2.

The Contractor shall identify and pothole all utilities prior to beginning of this work. It shall be the responsibility and liability of the Contractor to determine the existence or non-existence of such utilities and to protect them from damage at all times.

Addendum Item 2.15. Change to Section 2-13.2.1.5.A.5. Clarification of Temporary Striping Requirements

<u>Delete:</u>

using removable thermoplastic reflective tape (3M Stamark Wet Reflective Removable Tape Series 710 or equal)

Addendum Item 2.16. Change to Section 3-07.1 Material. Clarification of Asphalt Mix Designs

<u>Delete:</u>

Asphalt concrete to be placed shall conform to the requirements of Section 203-6 of the Standard Specification. AC wearing surface course shall be 3/8" fine mix, PG 70-10. AC base course shall be 3/4" mix, PG 70-10.

<u>Replace with:</u>

Asphalt concrete to be placed shall conform to the requirements of Section 203-6 of the Standard Specification. AC wearing surface course shall be 3/8" fine mix, **C2- PG 70-10**. AC base course shall be 3/4" mix, **B- PG 70-10.**

Addendum Item 2.17. Changes to Issued Plan Sheets (Clouded Theron): Attachment A

Changes, additions, and/or deletions are made to the following Plan sheets for the above noted project:

Sheet 1 – Title Sheet

Sheet 2 – General Information

Sheets 3- 5 – Civil Typical Sections

Sheets 16-25 – Civil Improvements

Sheets 27-38 – Storm Drain Improvements

Sheets 44-45 – Storm Drain Improvements

Addendum Item 2.18. Addition of Street Lighting Plan: Attachment B

A Street Lighting Plan was included in the Bid Documents already issued for bid, with an indication that those plans would be replaced with an addendum. This Street Lighting Plan replaces those previously issued sheets in their entirety.

Addendum Item 2.19. Addition of Supplemental Landscape (SLS) Plan and Specification (Bio Swales on the North Side of North Santa Monica Boulevard): Attachment C

This SLS plan and specification shall serve as a clarification and supplement to the bid documents related to the construction of bio swales on the north side of NSMB.

SLS Specifications apply to the work shown on the SLS Plan only.

Addendum Item 2.20. Answers to Contractor RFI's: Attachment D

A log of RFI's submitted by contractors during the bid period and the City's responses is attached.

Addendum Item 2.21. Revised Contractor Proposal Form: Attachment E

A revised proposal form is included for contractors to use while proposing on this project.

Samer Elayyan, P.E.
Project Manager
City of Beverly Hills

5/27/16
Date:

Kevin Klaus, P.E.
Senior Project Manager
Psomas

5/27/16
Date:

BIDDER'S CERTIFICATION

I hereby acknowledge receipt of Addendum No. 2 and accept all conditions contained herein.

Date: _____

BIDDER: _____

BY: _____

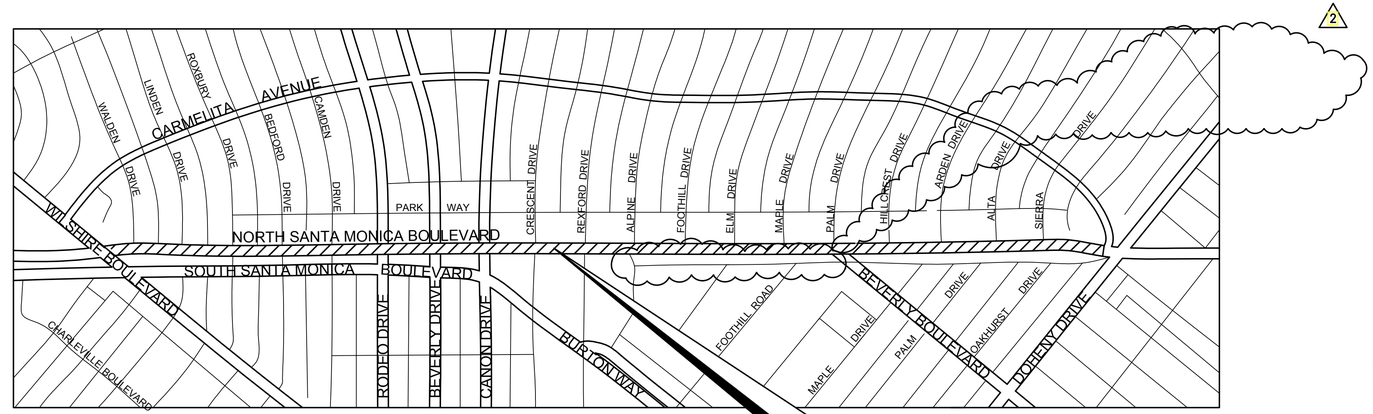
CONSTRUCTION PLANS FOR THE

CITY OF BEVERLY HILLS
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION PROJECT

FROM WILSHIRE BOULEVARD TO DOHENY DRIVE

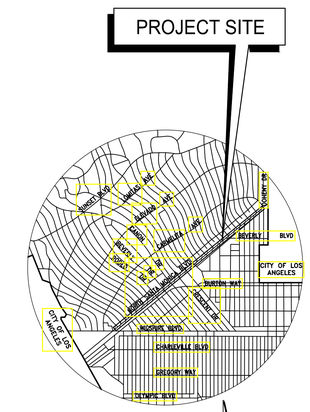
EMERGENCY TELEPHONE NUMBERS

AGENCY	NUMBER
UNDERGROUND SERVICE ALERT	811
SOUTHERN CALIFORNIA GAS COMPANY (PETER JENKS)	310-687-2032
SOUTHERN CALIFORNIA EDISON COMPANY (KIM GURULE)	714-796-9932
CITY OF BEVERLY HILLS (ERIC KELLER)	310-285-2505
LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS	626-458-5100
METROPOLITAN FIBER SYSTEMS (MFS)	213-489-4637
LOS ANGELES DEPARTMENT OF WATER & POWER	213-367-1225
LOS ANGELES COUNTY FLOOD CONTROL DISTRICT	626-445-7630
METROPOLITAN TRANSPORTATION AUTHORITY (MTA)	213-626-4455
CITY OF BEVERLY HILLS WASTEWATER DISPOSAL SERVICES	310-285-2469
TIME WARNER (BOB ROTHGERY)	818-988-2214
LEVEL 3 COMMUNICATIONS (MATT PRINK)	720-888-2639
QWEST/ CENTURY LINK	714-666-9219
AT&T	213-787-0212



LOCATION MAP
NOT TO SCALE

PROJECT AREA



VICINITY MAP
NOT TO SCALE

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
01	TITLE SHEET
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66-77	IRRIGATION PLANS
78-85	LANDSCAPE PLANS
SLP-01-SLP-27	SUPPLEMENTAL IRRIGATION AND PLANTING PLANS

NOTICE TO CONTRACTOR

THE EXISTENCE, LOCATION AND CHARACTERISTICS OF ANY UNDERGROUND UTILITY INFORMATION SHOWN HEREON HAS BEEN OBTAINED FROM A REVIEW OF AVAILABLE RECORD DATA. IT SHALL BE THE RESPONSIBILITY AND LIABILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE OR NONEXISTENCE OF SUCH UTILITIES AND TO PROTECT THEM IN PLACE.

BENCHMARK

THE BENCHMARK FOR THIS SURVEY IS THE NGS BENCHMARK DISK IN TOP OF THE CONCRETE MONUMENT LOCATED AT THE INTERSECTION OF WILSHIRE BLVD AND SANTA MONICA BLVD REFERENCED AS NGS PID EW6503 ON THE NGS DATA SHEET.
ELEVATION: 271.40, NGVD 29 MSL (173.53 NAVD88)
NOTE: THE NGVD 29 ELEVATION WAS HELD FOR THE ELEVATIONS SHOWN HEREIN.

BASIS OF BEARINGS

THE BASIS OF BEARING FOR THIS SURVEY IS THE CALIFORNIA COORDINATE SYSTEM CCS83, ZONE 5, 2007.00 EPOCH BASED UPON CITY OF BEVERLY HILLS CONTROL PER RBF CONSULTING JOB NO. 10-106321. SAID RBF CONTROL WAS VERIFIED BY RICK ENGINEERING UTILIZING STATIC G.P.S. SESSIONS TAKEN ON DECEMBER 29. 2009 CONSTRAINED TO CORS STATIONS DSHAM FXHSM LFRS, & UCLP.
BEARING RFD CONSULTING PT. NO. 10106 TO 10254 : S65°00'58"W 7400.02'

SCALE AS SHOWN

F.B. NO.	PAGE	TO
DESIGNED	VH	DATE 12/ 14/ 2015
DRAWN	HC	DATE 12/ 14/ 2015
CHECKED	CM	DATE 2/ 16/ 2016

DATE	REVISION	BY
06/02/16	2 ADDENDUM NO. 2	VH

REGISTERED PROFESSIONAL ENGINEER CHARLES R. HEFFERNAN NO. 40759 EXP. 03/31/17 CIVIL STATE OF CALIFORNIA

PSOMAS
555 South Flower Street, Suite 4300
Los Angeles, CA 90071
(213) 223-1400 (213) 223-1444 (FAX)
CHARLES R. HEFFERNAN PE 40759 04/ 08/ 2016 DATE

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

TITLE SHEET

WILSHIRE BOULEVARD TO DOHENY DRIVE

SUBMITTED DATE
APPROVED DATE 04/ 08/ 2016

JOB NO. 2184
DRAWING NO. 7449
SHEET 01 OF 85 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT

DWG Name: W:\VBEV041000\Public_Works\Sheets\TTL-01.DWG Plotted by: vincent.hellens on May 24, 2016 - 8:51:23

GENERAL NOTES

1 — ALL WORK DETAILED ON THESE CONSTRUCTION DRAWINGS, EXCEPT AS OTHERWISE STATED IN THE CONTRACT SPECIFICATIONS, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF BEVERLY HILLS STANDARD CONTRACTUAL REQUIREMENTS, AMERICAN PUBLIC WORKS ASSOCIATION STANDARD PLANS AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AND THE STATE OF CALIFORNIA STANDARD PLANS AND SPECIFICATIONS, LATEST EDITION.

2 — INSPECTION: ALL WORK AND MATERIAL ARE SUBJECT TO INSPECTION PURSUANT TO SECTION 2-11 OF THE 2015 STANDARD SPECIFICATIONS. CALL (310) 285-2467 (24 HOURS) PRECEDING THE REQUIRED INSPECTION.

3 — EXISTING UNDERGROUND UTILITIES ARE SHOWN AS PER AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION AND ELEVATION, IF REQUIRED, IN THE FIELD PRIOR TO BEGINNING CONSTRUCTION OF THE NEW FACILITIES.

4 — ALL P.C.C. AND A.C. REMOVALS SHALL BE OUTLINED OR MATCHED TO THE NEAREST SCORE LINE BEYOND THE NECESSARY WORKING LIMITS AND SAWCUT TO A MINIMUM DEPTH OF 2 INCHES PRIOR TO THE REMOVAL. UNLESS OTHERWISE STATED IN THE SPECIAL PROVISIONS, ALL DEBRIS CREATED BY THE REMOVAL OPERATIONS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF AWAY FROM THE JOB SITE DAILY, IN A MANNER AND AT A LOCATION ACCEPTABLE TO ALL AGENCIES AFFECTED BY THE WORK.

5 — TRAFFIC CONTROL DURING CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION. TRAFFIC CONTROL PLANS ARE REQUIRED AND SHALL BE PREPARED AND SIGNED BY A TRAFFIC ENGINEER.

6 — IN ALL OPERATIONS, THE REQUIREMENTS OF THE STATE DIVISION OF INDUSTRIAL SAFETY FOR TRENCHES, EXCAVATIONS AND SHORING SHALL APPLY. SAFETY IS STRESSED. ANY OPERATION OR SITUATION THAT THREATENS THE SAFETY OF WORKERS OR THE PUBLIC, INCLUDING IMPROPER TRAFFIC CONTROL, SHALL CAUSE THE SUSPENSION OF WORK UNTIL CORRECTIONS ARE MADE.

7 — ALL OPEN EXCAVATIONS WITHIN A STREET SHALL BE STEEL PLATED AT ALL TIMES, EXCEPT WHEN THE CONTRACTOR IS PHYSICALLY WORKING WITHIN THE AREA AND HAS PLACED BARRICADES TO THE SATISFACTION OF THE ENGINEER.

8 — WHEN STEEL PLATES ARE IN USE, THEY SHALL BE INSTALLED FLUSHED WITH EXISTING PAVEMENT.

9 — THE CONTRACTOR SHALL CONDUCT CONSTRUCTION OPERATIONS IN SUCH A MANNER THAT STORM OR OTHER WATERS MAY PROCEED UNINTERRUPTED AND WITHOUT EROSION ALONG THEIR EXISTING STREET OR DRAINAGE COURSES.

10 — IN THE COURSE OF RUNOFF WATER CONTROL, THE CONTRACTOR SHALL PROTECT ALL WATER COURSES, THE GROUND WATER AND BODIES OF WATER FROM POLLUTION BY FUELS, OILS, BITUMENS OR OTHER HARMFUL MATERIALS.

11 — HIGH VISIBILITY ORANGE VESTS SHALL BE WORN AT ALL TIMES WHEN WORKING ON THE PROJECT.

12 — CONTRACTOR SHALL WATER TEST GUTTERS WITH LESS THAN HALF A PERCENT SLOPE TO DETECT LOW SPOTS. THIS MUST BE DONE AFTER THE CONCRETE HAS HARDENED, TO PERMIT WATER CHECKING WITHOUT DAMAGING THE SURFACE, BUT SOON ENOUGH THAT THE FLOW LINE CAN BE REWORKED TO OBTAIN PROPER DRAINAGE.

13 — PAVEMENT OVER CUT FOR THE CONSTRUCTION OF CONCRETE IMPROVEMENTS WHICH JOINS AN EXISTING ASPHALT PAVEMENT SHALL BE MINIMUM 12" WIDE AND SHALL BE BACKFILLED WITH 4" AC OVER 6" OF CMB.

14 — EXISTING UTILITY BOXES WITHIN TWO FEET OF THE BACK OF THE NEW CURBS SHALL BE ADJUSTED TO GRADE, WHETHER SHOWN ON THE PLANS OR NOT.

15 — STREET NAME SIGNS AND POSTS SHALL BE PROTECTED IN PLACE, UNLESS NOTED OTHERWISE.

16 — CURB RAMP SLOPES ARE MAXIMUM REQUIREMENTS. THE CONTRACTOR SHALL MAINTAIN THE GRADES AT OR BELOW THE MAXIMUM SLOPES SHOWN. THESE REQUIREMENTS SHALL NOT BE EXCEEDED.

17 — THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT 48 HOURS PRIOR TO ANY EXCAVATION. TELEPHONE: 811.

18 — THE CONTRACTOR SHALL NOTIFY THE CITY OF BEVERLY HILLS PUBLIC WORKS DEPARTMENT 48 HOURS PRIOR TO COMMENCEMENT OF WORK. TELEPHONE: (310) 285-2467.

19 — CONCRETE MIX DESIGN REFERENCED IN THE CITY OF BEVERLY HILLS STANDARD DRAWING DETAILS SHALL BE SUPERSEDED BY SECTION 3-05.1 OF THE PROJECT SPECIFICATIONS.

20 — FAILURE TO COMPLY WITH ANY OF THE CONTRACT PROVISIONS SHALL BE SUFFICIENT CAUSE FOR THE CITY TO ARRANGE FOR THE NECESSARY WORK TO BE PERFORMED BY OTHERS. ANY COSTS INCURRED TO COMPLETE THE NECESSARY WORK WILL BE CHARGED TO THE CONTRACTOR.

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PIPE CONNECTIONS TO EXISTING STORM DRAINS	335-2
TRANSITION STRUCTURE PIPE TO PIPE	340-2
TRANSITION STRUCTURE - DOUBLE RCB TO DOUBLE RCB	344-2
CONCRETE COLLAR FOR RCP 12"-72"	380-4
ROOT PRUNING	523-2

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

Underground Service Alert
Call: TOLL FREE
811
TWO WORKING DAYS BEFORE YOU DIG

WARNING:
BEFORE STARTING WORK ON EXISTING SERIES STREET LIGHTING CIRCUITS, CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM THE SERVING UTILITY. CUT-OUT PLUGS MUST BE PULLED AND "MEN AT WORK" SIGNS POSTED BEFORE ANY WORK IS DONE OR CONNECTIONS MADE.

BEST MANAGEMENT PRACTICES FOR CONSTRUCTION ACTIVITIES

1. ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON-SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEETFLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES OR WIND.

2. STOCKPILES OR EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.

3. FUELS, OILS, SOLVENTS, AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.

4. EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE PROVIDED TO RETAIN ALL CONCRETE WASTES ON-SITE UNTIL THEY CAN BE DISPOSED OF SOLID WASTE, SUCH AS WASTE CONCRETE FROM THE CONCRETE WASHOUT BIN.

5. TRASH AND CONSTRUCTION RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.

6. SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT WASHED

7. ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.

STORMWATER POLLUTION CONTROL REQUIREMENTS FOR STORM DRAIN CONSTRUCTION
PER CALIFORNIA STORM WATER QUALITY ASSOCIATION, STORMWATER BEST MANAGEMENT PRACTICE CONSTRUCTION HANDBOOK.

EC-1 - SCHEDULING
EC-2 - PRESERVATION OF EXISTING VEGETATION
EC-4 - HYDROSEEDING
EC-7 - GEOTEXTILES AND MATS
EC-8 - WOOD MULCHING
EC-10 - VELOCITY DISSIPATION DEVICES
EC-11 - SLOPE DRAINS

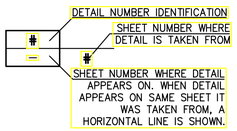
SE-1 - SILT FENCE
SE-4 - CHECK DAMS
SE-7 - STREET SWEEPING AND VACUUMING
SE-8 - SANDBAG BARRIER
SE-9 - STRAW BALE BARRIERS
SE-10 - STORM DRAIN INLET PROTECTION

TC-2 - STABILIZED CONSTRUCTION ROADWAY
WE-1 - WIND EROSION CONTROL

NS-2 - DEWATERING OPERATIONS
NS-3 - PAVING AND GRINDING OPERATIONS
NS-8 - VEHICLE AND EQUIPMENT CLEANING
NS-9 - VEHICLE AND EQUIPMENT FUELING
NS-10 - VEHICLE AND EQUIPMENT MAINTENANCE
NS-12 - CONCRETE CURING
NS-13 - CONCRETE FINISHING

WM-2 - MATERIAL USE
WM-3 - STOCKPILE MANAGEMENT
WM-4 - SPILL PREVENTION AND CONTROL
WM-5 - SOLID WASTE MANAGEMENT
WM-6 - HAZARDOUS WASTE MANAGEMENT
WM-8 - CONCRETE WASTE MANAGEMENT

DETAIL CALLOUT AND TITLE



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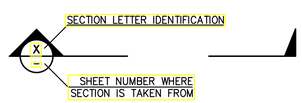

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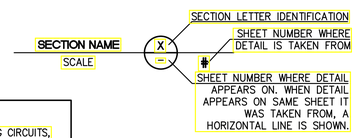

ABBREVIATIONS

AC	ASPHALT CONCRETE
BC	BEGIN CURVE
BCR	BEGINNING OF CURB RETURN
BEG	BEGINNING
BH	BEVERLY HILLS
BLVD	BOULEVARD
BVC	BEGIN VERTICAL CURVE
BW	BACK OF SIDEWALK
CB	CATCH BASIN
C&G	CURB AND GUTTER
CL	CENTER LINE
CMB	CRUSHED MISCELLANEOUS BASE
CONST	CONSTRUCTION
CTB	CEMENT TREATED BASE
DIA	DIAMETER
DR	DRIVE
DWY	DRIVEWAY
EC	END CURVE
ECR	END OF CURB RETURN
ELEC	ELECTRICAL
EV	ELECTRICAL VAULT
EVC	END VERTICAL CURVE
EX	EXISTING
FS	FINISH SURFACE
FH	FIRE HYDRANT
HMA	HOT MIX ASPHALT
GB	GRADE BREAK
INV	INVERT
LT	LEFT
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MOD	MODIFIED
PB	PULL BOX
PCC	PORTLAND CEMENT CONCRETE
PGL	PROFILE GRADE LINE
PM	PARKING METER
POC	POINT OF CONNECTION
PROP	PROPOSED
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
RCP	REINFORCED CONCRETE PIPE
RMP	RAMP
RT	RIGHT
R/W	RIGHT OF WAY
TC	TOP OF CURB
TCE	TEMPORARY CONSTRUCTION EASEMENT
TS	TRAFFIC SIGNAL
TSPB	TRAFFIC SIGNAL PULL BOX
TW	TOP OF WALL
TYP	TYPICAL
SD	STORM DRAIN
SL	STREET LIGHTING
SP	SERVICE POINT
SPPWC	STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION
ST	STREET
STA	STATION
STD	STANDARD
SW	SIDEWALK
WM	WATER METER
WV	WATER VALVE

* NOTE:

ALL OTHER ABBREVIATIONS ARE DEFINED IN SECTION 1-3.2 OF THE "GREENBOOK" STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.

STORM DRAIN CONCRETE REMOVAL NOTES:

1. WHERE A SECTION OF AN EXISTING STRUCTURE IS TO BE SEPARATED FROM A NEW STRUCTURE, AND THE REINFORCEMENT IS TO BE CUT AT THE POINT OF SEPARATION, THE CONTRACTOR SHALL SAWCUT THROUGH THE WALL WITH AN APPROVED CONCRETE SAW. ANY SAW CUT OR IRREGULARITIES IN THE SURFACE OF THE REMAINING WALL OR JOINT SHALL BE FILLED WITH AN EPOXY GROUT MIXTURE TO OBTAIN A SMOOTH PLANE SURFACE. THE REINFORCING STEEL EXPOSED BY CONCRETE REMOVAL SHALL BE BURNED OFF ONE (1) INCH BELOW THE SURFACE OF THE REMAINING CONCRETE AND THE RESULTING VOIDS SHALL BE PATCHED WITH EPOXY ADHESIVE. EPOXY SHALL BE A COMMERCIAL QUALITY, TWO-COMPONENT MIXTURE, SPECIALLY MANUFACTURED FOR THE INTENDED PURPOSE, AND BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS. ONE-HALF INCH THICK PREMOLDED EXPANSION JOINT MATERIAL SHALL BE USED TO SEPARATE THE FACES OF THE EXISTING AND NEW WALL.

2. WHERE REINFORCEMENT IS REQUIRED TO EXTEND THROUGH THE NEW JOINT, CONCRETE SHALL BE REMOVED IN THE FOLLOWING SEQUENCE.

   a. *A SAWCUT SHALL BE MADE ONE AND ONE-HALF INCHES DEEP AT THE REMOVAL LIMITS. CARE SHALL BE EXERCISED IN SAWING AT THE REMOVAL LIMITS SO AS NOT TO CUT THE REINFORCING STEEL IN THE REMAINING SLAB. THE EXISTING REINFORCING STEEL SHALL BE RETAINED AND EXTENDED INTO THE NEW CONSTRUCTION AS INDICATED ON THE PLANS.*

   b. *USING HANDHELD EQUIPMENT, THE CONCRETE SHALL BE CAREFULLY REMOVED FOR THE FULL DEPTH OF THE WALL OR SLAB AND FOR A MINIMUM DISTANCE FROM THE SAWCUT EQUAL TO THE LONGEST EXTENSION OF THE EXISTING BARS TO BE EXTENDED INTO THE NEW CONSTRUCTION. THIS EXTENSION SHALL BE 30 BAR DIAMETERS, UNLESS OTHERWISE SHOWN.*

   c. *EXISTING REINFORCEMENT SHALL BE CUT TO THE REQUIRED BAR EXTENSION.*

   d. *THE REMAINING CONCRETE MAY BE REMOVED BY ANY SUITABLE METHOD UPON APPROVAL OF THE ENGINEER, WHO SHALL BE THE SOLE JUDGE OF THE USE OF ANY CONCRETE REMOVAL EQUIPMENT. EXPLOSIVES, WRECKING BALL, OR OTHER SIMILAR DEVICES, WHICH ARE LIKELY TO DAMAGE THE CONCRETE TO BE LEFT IN PLACE SHALL NOT BE PERMITTED.*

STORM DRAIN CONSTRUCTION NOTES:

1. R.C.P. STORM DRAIN, D-LOAD = 2000, SIZE PER PLAN
2. CMP STORM DRAIN, SIZE PER PLAN
3. CIP STORM DRAIN, SIZE PER PLAN
4. NOT USED
5. STORM DRAIN INLET
6. STORM DRAIN PVC FITTING (SDR-35). TYPE PER PLAN, SIZE PER ADJOINING PIPE
7. CURB OPENING CATCH BASIN PER SPPWC STD. PLAN 300-3 (SIZE PER PLAN) WITH CONNECTOR PIPE SCREEN (CPS) AND AUTOMATIC RETRACTABLE SCREEN (ARS) WINGATE BY UNITED STORM WATER, OR APPROVED EQUAL
8. CURB OPENING CATCH BASIN WITH GRATING PER SPPWC STD. PLAN 302-3, FRAME AND GRATING (BICYCLE SAFE) PER CITY OF LA STANDARD PLAN S-342-4 (SIZE PER PLAN) WITH CONNECTOR PIPE SCREEN (CPS) AND AUTOMATIC RETRACTABLE SCREEN (ARS) WINGATE BY UNITED STORM WATER, OR APPROVED EQUAL
9. BROOKS CATCH BASIN NO. 1212 WITH TRAFFIC GRATE
10. MANHOLE PER SPPWC STD. PLAN 320-2 (MAIN LINE ID ≥ 36")
11. MANHOLE PER SPPWC STD. PLAN 321-2 (MAIN LINE ID < 33")
12. BROOKS CATCH BASIN NO. 1212 WITH TRAFFIC COVER
13. JUNCTION STRUCTURE PER SPPWC STD. PLAN 331-3
14. JUNCTION STRUCTURE PER SPPWC STD. PLAN 332-2
15. HDPE STORM DRAIN PIPE (DR 17), SIZE PER PLAN
16. CONNECT TO EXISTING STORM DRAIN PER SPPWC STD. PLAN 335-2
17. CONCRETE COLLAR PER SPPWC STD. PLAN 380-4
18. 12"X12"X2" CONCRETE MAT WITH WELDED WIRE MESH PER DETAIL3/SHEET 43
19. TRANSITION STRUCTURE PER SPPWC STD. PLAN 340-2, PIPE TO PIPE (SIZE PER PLAN)
20. STORM DRAIN INSTALLATION DETAIL, SEE ROADWAY IMPROVEMENT PLAN SHEET 5.
21. MONOLITHIC CATCH BASIN CONNECTION PER SPPWC STD. PLAN 308-2
22. CATCH BASIN LOCAL DEPRESSION PER SPPWC STD. PLAN 313-3, CASE E
23. CATCH BASIN LOCAL DEPRESSION PER SPPWC STD. PLAN 313-3, CASE B
24. 6" PERFORATED PVC PIPE PER SPPWC SECTION 207-1.7, SEE ROADWAY IMPROVEMENT PLAN FOR VEGETATED SWALE CROSS SECTION DETAIL
25. CONCRETE ENCASEMENT PER CITY OF BEVERLY HILLS STD. DRAWING BH 213, CASE ii
26. CATCH BASIN LOCAL DEPRESSION PER SPPWC STD. PLAN 313-3, CASE A
27. CATCH BASIN LOCAL DEPRESSION PER SPPWC STD. PLAN 313-3, CASE C
28. SEWER LINE (SIZE PER PLAN)
29. TERMINAL MANHOLE "Q" PER CITY OF BEVERLY HILLS STD. PLAN BH-206 AND NON-ROCKING MANHOLE FRAME AND COVER PER CITY OF BEVERLY HILLS STD. PLAN BH-208
30. UTILITY CROSSING PER DETAIL 1/SHEET 46 (2)
31. EXISTING WATER STRUCTURE
32. LANDSCAPING

CONSTRUCTION NOTES:

CONSTRUCT
EXISTING (PROTECT IN PLACE)
REMOVE
REMODEL EXISTING
REMOVE & RECONSTRUCT
WORK BY OTHERS

1. CURB RAMP PER CITY OF BEVERLY HILLS STD. PLAN BH 103 (CASE PER PLAN).
2. 4" PCC SIDEWALK PER CITY OF BEVERLY HILLS STD. PLAN BH 105 AND BH 104. SAWCUT AND JOIN SIDEWALK AT NEAREST JOINT.
3. NON-RESIDENTIAL INTEGRAL CURB AND GUTTER PER CITY OF BEVERLY HILLS STD. PLAN BH 107.
4. ALLEY APPROACH PER CITY OF BEVERLY HILLS STD. PLAN BH 108.
5. LONGITUDINAL ALLEY GUTTER PER CITY OF BEVERLY HILLS STD. PLAN BH 111.
6. CROSS AND LONGITUDINAL GUTTERS PER SPPWC STD. PLAN 122-2.
7. MODIFIED CONCRETE BUS PAD PER SPPWC STD. PLAN 131-2. (SEE DETAIL ON SHEET 03)
8. ASPHALT CONCRETE (B-PG 70-10 HMA) PAVEMENT (t=6"). (2)
9. CRUSHED MISCELLANEOUS BASE (DEPTH PER TYPICAL SECTIONS).
10. PORTLAND CEMENT CONCRETE (t=8").
11. CEMENT-TREATED SUBBASE (t=11.5" MIN).
12. SURVEY MONUMENTS ADJUST TO FINISH SURFACE PER BEVERLY HILLS STD. PLAN BH 605.
13. MANHOLE, METER, OR VALVE TO GRADE.
14. UNCLASSIFIED EXCAVATION.
15. 4" CURB DRAIN IN 8" CURB PER BEVERLY HILLS STD. PLAN BH 109.
16. PARKWAY DRAIN PER BEVERLY HILLS STD. PLAN BH 110.
17. GRADE ONLY (90% COMPACTION).
18. 2" THICK ASPHALT CONCRETE (FINISH OVERLAY) PAVEMENT (C2-PG-70-10 HMA). (2)
19. ELECTRICAL VAULT, ELECTRICAL CABINET, AND TSPB PER TRAFFIC SIGNAL AND STREET LIGHTING PLANS.
20. TRAFFIC SIGNAL POLES/ LIGHT POLES PER TRAFFIC SIGNAL AND LIGHTING PLANS.
21. PEDESTRIAN PUSH BUTTON PER TRAFFIC SIGNAL PLANS.
22. BOLLARDS.
23. NON-RESIDENTIAL DRIVEWAY APPROACH PER CITY OF BEVERLY HILLS STD. PLAN BH 102.
24. CATCH BASIN PER STORM DRAIN IMPROVEMENT PLANS.
25. FIRE HYDRANT PER CITY OF BEVERLY HILLS STD. PLAN BH 704
26. LANDSCAPING PER LANDSCAPE PLANS.
27. CONCRETE CURB PER SPPWC STD PLAN 120-2, TYPE A1-6.
28. TREE AND TREE WELL.
29. CONCRETE BUS PAD PER SPPWC STD. PLAN 131-2.
30. PCC PAVEMENT. (DEPTH PER PLAN)
31. FENCE
32. COLDMILL 2" AC PAVEMENT.
33. SOD
34. EXISTING IRRIGATION SPRINKLER SYSTEM
35. VEGETATED BIOSWALE (SEE SHEET 05 FOR DETAIL AND LIMITS)
36. DETECTABLE WARNING SURFACE PER CITY OF BEVERLY HILLS STD. PLAN BH 103.
37. BUS FURNITURE
38. MEDIAN TAPER PER SPPWC STD. PLAN 140-3
39. SIGN PER SIGNING AND STRIPING PLANS
40. EXISTING PAVEMENT (AC, BASE, PCC, AND SUBBASE) DEPTH PER TYPICAL SECTION. (2)
41. HDPE STORM DRAIN PIPE (DR 17), SIZE PER PLAN
42. BROOKS CATCH BASIN NO. 1212 WITH TRAFFIC GRATE
43. BROOKS CATCH BASIN NO. 1212 WITH TRAFFIC COVER

PSOMAS
555 South Flower Street, Suite 4300
Los Angeles, CA 90071
(213) 223-1400 (213) 223-1444 (FAX)
CHARLES R. HEFFERNAN PE 40759 04/ 08/ 2016 DATE

REGISTERED PROFESSIONAL ENGINEER CHARLES R. HEFFERNAN NO. 40759 EXP. 03/31/17 CIVIL STATE OF CALIFORNIA

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

GENERAL INFORMATION

WILSHIRE BOULEVARD TO DOHENY DRIVE

SCALE AS SHOWN			
F.B. NO.	PAGE	TO	
DESIGNED	VH	DATE 12/ 14/ 2015	
DRAWN	HC	DATE 12/ 14/ 2015	
CHECKED	CM	DATE 2/ 16/ 2016	
06/02/16	2	ADDENDUM NO. 2	VH
DATE		REVISION	BY

SUBMITTED ____ DATE ____
APPROVED ____ DATE 04/ 08/ 2016

JOB NO. 2184
DRAWING NO. 7449
SHEET 02 OF 85 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT

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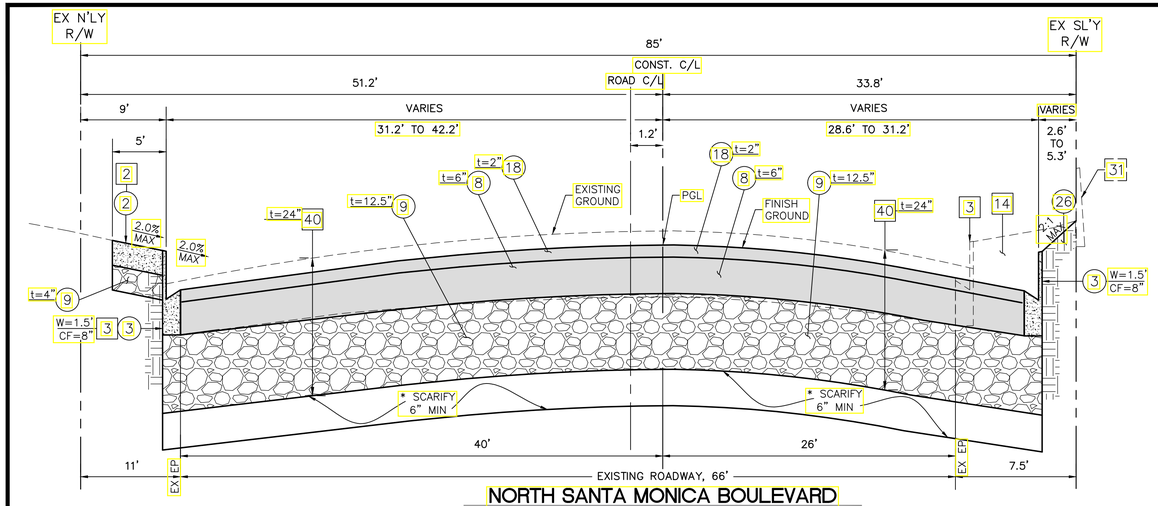
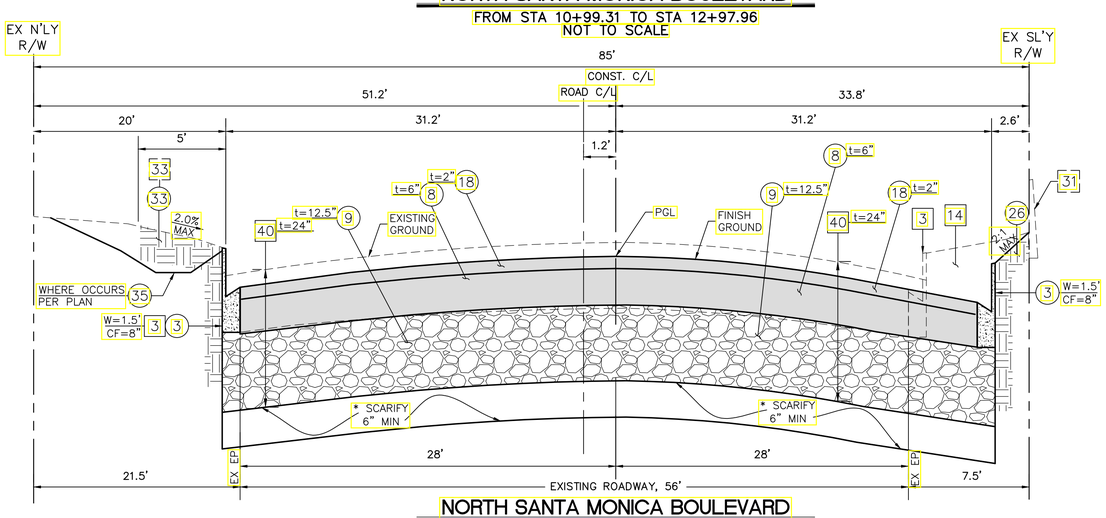


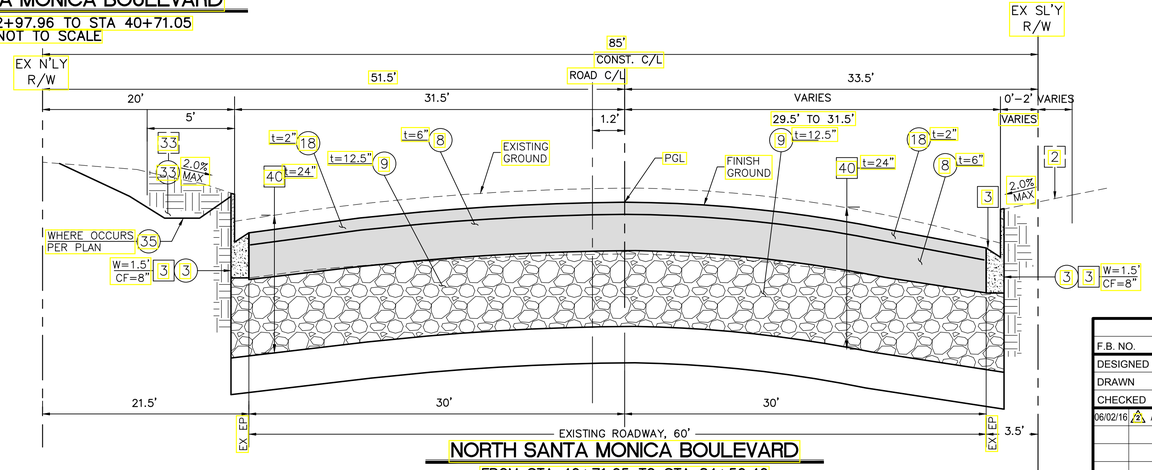
NORTH SANTA MONICA BOULEVARD

FROM STA 10+99.31 TO STA 12+97.96
NOT TO SCALE



NORTH SANTA MONICA BOULEVARD

FROM STA 12+97.96 TO STA 40+71.05
NOT TO SCALE



NORTH SANTA MONICA BOULEVARD

FROM STA 40+71.05 TO STA 84+50.40
NOT TO SCALE

CONSTRUCTION NOTES:

- CONSTRUCT
- EXISTING (PROTECT IN PLACE)
- REMOVE
- REMODEL EXISTING
- REMOVE & RECONSTRUCT
- WORK BY OTHERS

2. 4" PCC SIDEWALK PER CITY OF BEVERLY HILLS STD. PLAN BH 105 AND BH 104. SAWCUT AND JOIN SIDEWALK AT NEAREST JOINT.
3. NON-RESIDENTIAL INTEGRAL CURB AND GUTTER PER CITY OF BEVERLY HILLS STD. PLAN BH 107.
8. ASPHALT CONCRETE (B-PG 70-10 HMA) PAVEMENT (t=6"). 2
9. CRUSHED MISCELLANEOUS BASE (DEPTH PER TYPICAL SECTIONS).
14. UNCLASSIFIED EXCAVATION.
18. 2" THICK ASPHALT CONCRETE (FINISH OVERLAY) PAVEMENT (C2-PG-70-10 HMA). 2
26. LANDSCAPING PER LANDSCAPE PLANS.
31. FENCE
33. SOD
35. VEGETATED BIOSWALE (SEE SHEET 05 FOR DETAIL AND LIMITS)
40. EXISTING PAVEMENT (AC, BASE, PCC, AND SUBBASE) DEPTH PER TYPICAL SECTION.

LEGEND

- PCC
- AC
- CMB
- EXISTING
- EXISTING GROUND
- CENTERLINE
- EXISTING R/W

NOTES

1. PARABOLIC STREET CROSS SECTION SHALL BE CONSTRUCTED PER CITY OF LOS ANGELES DESIGN MANUAL, CROSS SECTION ELEMENTS (E 400).
2. ALL EXISTING IMPROVEMENTS, INCLUDING CURB AND GUTTER, SIDEWALK, ASPHALT CONCRETE OR PCC PAVING THAT ARE BEING JOINED, OR MATCHED IN CONNECTION WITH THE PROJECT, SHALL BE JOINED, OR MATCHED TO THE NEAREST SCORE LINE BEYOND THE NECESSARY WORK LIMIT OR AS DIRECTED BY THE CITY ENGINEER. IN ADDITION, NECESSARY SAWCUTTING, REMOVAL, OR CAPPING, SATISFACTORY TO THE CITY ENGINEER.
3. ALL CONCRETE CURB AND GUTTER, AND PAVEMENT WITH LESS THAN 1% GRADE SHALL BE WATER TESTED PRIOR TO FINAL ACCEPTANCE TO INSURE POSITIVE DRAINAGE WITHOUT LOW SPOTS. IF ANY AREAS ARE IDENTIFIED WHERE PONDING OCCURS, THE CONTRACTOR SHALL REMOVE AND REPLACE THOSE IMPROVEMENTS AT HIS EXPENSE.
4. CONTRACTOR SHALL BACKFILL AND PLACE SOD IN TURF AREAS DAMAGED BY CONSTRUCTION.
5. * SCARIFY, REGRADE, AND COMPACT EXISTING AGGREGATE BASE TOP 6" TO 90% UP TO 95% COMPACTION.

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

Underground Service Alert
Call: TOLL FREE
811
TWO WORKING DAYS BEFORE YOU DIG

WARNING:
BEFORE STARTING WORK ON EXISTING SERIES STREET LIGHTING CIRCUITS, CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM THE SERVING UTILITY. CUT-OUT PLUGS MUST BE PULLED AND "MEN AT WORK" SIGNS POSTED BEFORE ANY WORK IS DONE OR CONNECTIONS MADE.

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CHARLES R. HEFFERNAN PE 40759 04/ 08/ 2016 DATE

REGISTERED PROFESSIONAL ENGINEER CHARLES R. HEFFERNAN NO. 40759 EXP. 03/31/17 CIVIL STATE OF CALIFORNIA

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

CIVIL TYPICAL SECTIONS

WILSHIRE BOULEVARD TO DOHENY DRIVE

SCALE AS SHOWN			
F.B. NO.	PAGE	TO	
DESIGNED	VH	DATE 12/ 14/ 2015	
DRAWN	HC	DATE 12/ 14/ 2015	
CHECKED	CM	DATE 2/ 16/ 2016	
06/02/16	2 ADDENDUM NO. 2		VH
DATE	REVISION		BY

SUBMITTED _____ DATE _____
APPROVED _____ DATE 04/ 08/ 2016

JOB NO. 2184
DRAWING NO. 7449
SHEET 03 OF 85 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT

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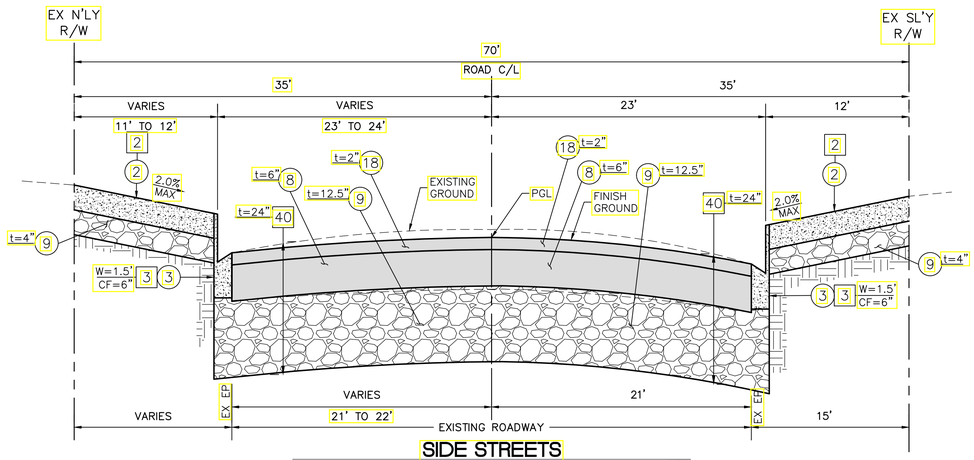
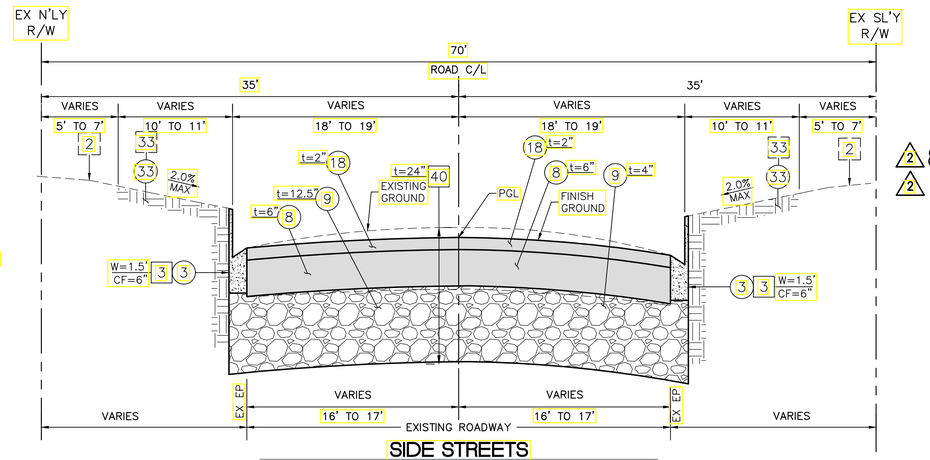


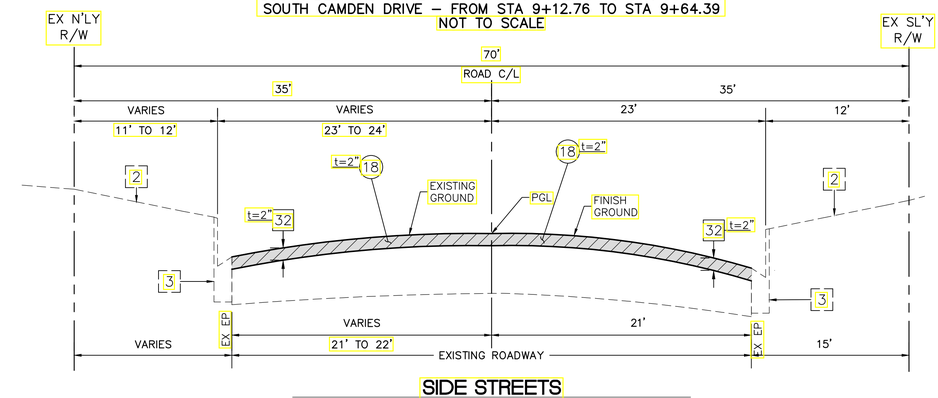
SIDE STREETS

SOUTH ROXBURY DRIVE – FROM STA 9+12.22 TO STA 9+64.44
SOUTH BEDFORD DRIVE – FROM STA 9+12.59 TO STA 9+64.44
SOUTH CAMDEN DRIVE – FROM STA 9+12.76 TO STA 9+64.39
NOT TO SCALE



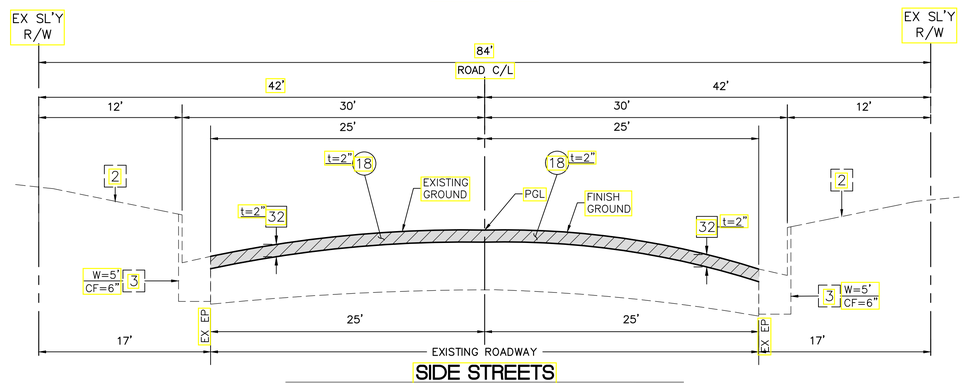
SIDE STREETS

NORTH ROXBURY DRIVE – FROM STA 10+36.16 TO STA 10+85.58
NORTH BEDFORD DRIVE – FROM STA 10+37.02 TO STA 10+79.16
NOT TO SCALE



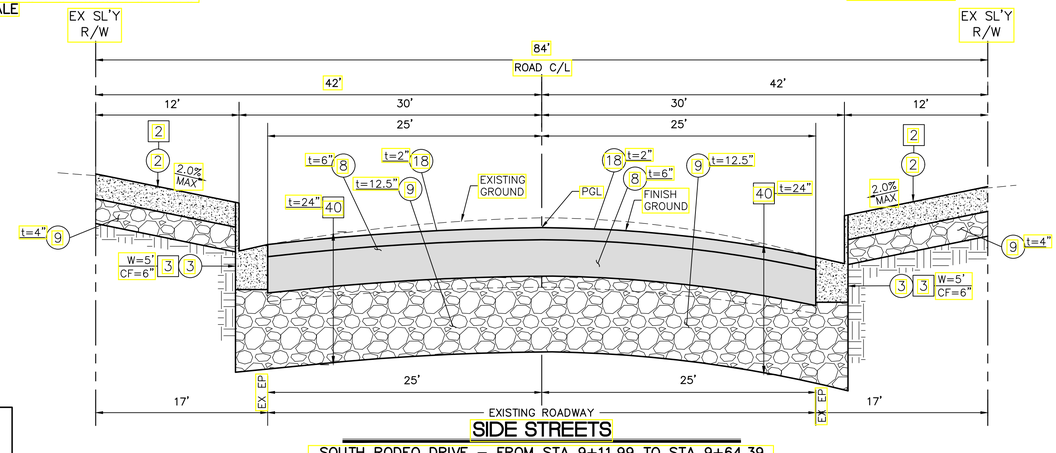
SIDE STREETS

SOUTH ROXBURY DRIVE – FROM STA 8+64.22 TO STA 9+12.22
SOUTH BEDFORD DRIVE – FROM STA 8+63.89 TO STA 9+12.59
SOUTH CAMDEN DRIVE – FROM STA 8+64.26 TO STA 9+12.76
NOT TO SCALE



SIDE STREETS

SOUTH RODEO DRIVE – FROM STA 8+63.27 TO STA 9+64.39
SOUTH BEVERLY DRIVE – FROM STA 8+64.35 TO STA 8+99.70
NOT TO SCALE



SIDE STREETS

SOUTH RODEO DRIVE – FROM STA 9+11.99 TO STA 9+64.39
SOUTH BEVERLY DRIVE – FROM STA 8+99.70 TO STA 9+64.44
NOT TO SCALE

CONSTRUCTION NOTES:

- CONSTRUCT
- EXISTING (PROTECT IN PLACE)
- REMOVE
- REMODEL EXISTING
- REMOVE & RECONSTRUCT
- WORK BY OTHERS

2. 4" PCC SIDEWALK PER CITY OF BEVERLY HILLS STD. PLAN BH 105 AND BH 104. SAWCUT AND JOIN SIDEWALK AT NEAREST JOINT.
3. NON-RESIDENTIAL INTEGRAL CURB AND GUTTER PER CITY OF BEVERLY HILLS STD. PLAN BH 107.
8. ASPHALT CONCRETE (B-PG 70-10 HMA) PAVEMENT (t=6").
9. ~~CRUSHED DISTRIBUTOR BASE (DEPTH PER TYPICAL SECTIONS).~~
18. 2" THICK ASPHALT CONCRETE (FINISH OVERLAY) PAVEMENT (C2-PG-70-10 HMA).
32. COLDMILL 2" AC PAVEMENT.
33. SOD
40. EXISTING PAVEMENT (AC, BASE, PCC, AND SUBBASE) DEPTH PER TYPICAL SECTION.

LEGEND

- PCC
- AC
- CMB
- COLD MILL
- EXISTING
- EXISTING GROUND
- CENTERLINE
- EXISTING R/W

NOTES

1. PARABOLIC STREET CROSS SECTION SHALL BE CONSTRUCTED PER CITY OF LOS ANGELES DESIGN MANUAL, CROSS SECTION ELEMENTS (E 400).
2. ALL EXISTING IMPROVEMENTS, INCLUDING CURB AND GUTTER, SIDEWALK, ASPHALT CONCRETE OR PCC PAVING THAT ARE BEING JOINED, OR MATCHED IN CONNECTION WITH THE PROJECT, SHALL BE JOINED, OR MATCHED TO THE NEAREST SCORE LINE BEYOND THE NECESSARY WORK LIMIT OR AS DIRECTED BY THE CITY ENGINEER. IN ADDITION, NECESSARY SAWCUTTING, REMOVAL, OR CAPPING, SATISFACTORY TO THE CITY ENGINEER.
3. ALL CONCRETE CURB AND GUTTER, AND PAVEMENT WITH LESS THAN 1% GRADE SHALL BE WATER TESTED PRIOR TO FINAL ACCEPTANCE TO INSURE POSITIVE DRAINAGE WITHOUT LOW SPOTS. IF ANY AREAS ARE IDENTIFIED WHERE PONDING OCCURS, THE CONTRACTOR SHALL REMOVE AND REPLACE THOSE IMPROVEMENTS AT HIS EXPENSE.
4. CONTRACTOR SHALL BACKFILL AND PLACE SOD IN TURF AREAS DAMAGED BY CONSTRUCTION.

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

Underground Service Alert
Call: TOLL FREE
811
TWO WORKING DAYS BEFORE YOU DIG

WARNING:
BEFORE STARTING WORK ON EXISTING SERIES STREET LIGHTING CIRCUITS, CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM THE SERVING UTILITY. CUT-OUT PLUGS MUST BE PULLED AND "MEN AT WORK" SIGNS POSTED BEFORE ANY WORK IS DONE OR CONNECTIONS MADE.

REGISTERED PROFESSIONAL ENGINEER CHARLES R. HEFFERNAN NO. 40759 EXP. 03/31/17 CIVIL STATE OF CALIFORNIA

SCALE AS SHOWN			
F.B. NO.	PAGE	TO	
DESIGNED	VH	DATE 12/ 14/ 2015	
DRAWN	HC	DATE 12/ 14/ 2015	
CHECKED	CM	DATE 2/ 16/ 2016	
06/02/16	2	ADDENDUM NO. 2	VH
DATE		REVISION	BY

PSOMAS
555 South Flower Street, Suite 4300
Los Angeles, CA 90071
(213) 223-1400 (213) 223-1444 (FAX)
CHARLES R. HEFFERNAN PE 40759 DATE 04/ 08/ 2016

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

CIVIL TYPICAL SECTIONS

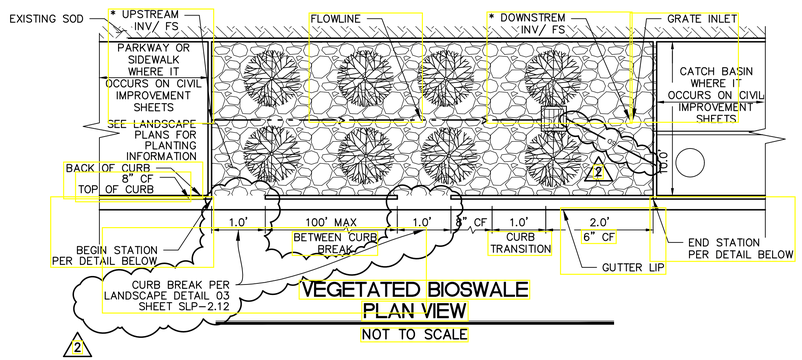
WILSHIRE BOULEVARD TO DOHENY DRIVE

SUBMITTED _____ DATE _____
APPROVED _____ DATE 04/ 08/ 2016

JOB NO. 2184
DRAWING NO. 7449
SHEET 04 OF 85 SHEET

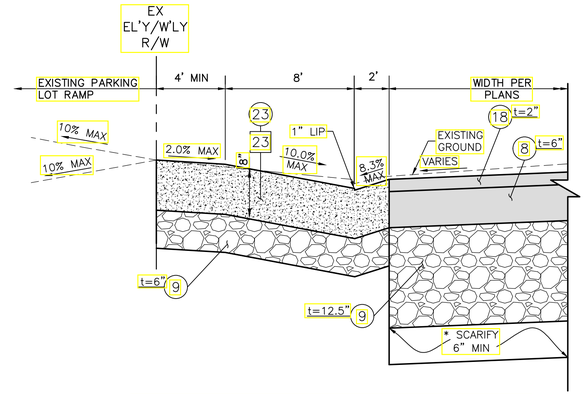
CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT

DWG Name: W:\BEV041000\Public_Works\Sheets\TYP-02.DWG Plotted by: vincent.hellens on May 23, 2016 – 18:45:12



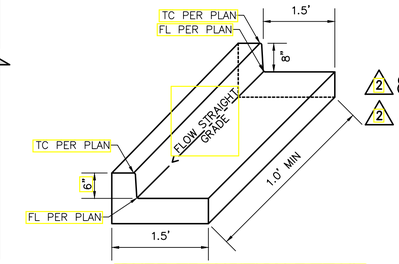
VEGETATED BIOSWALE PLAN VIEW

NOT TO SCALE



NON-RESIDENTIAL DRIVEWAY APPROACH

NOT TO SCALE



CURB TRANSITION DETAIL

NOT TO SCALE

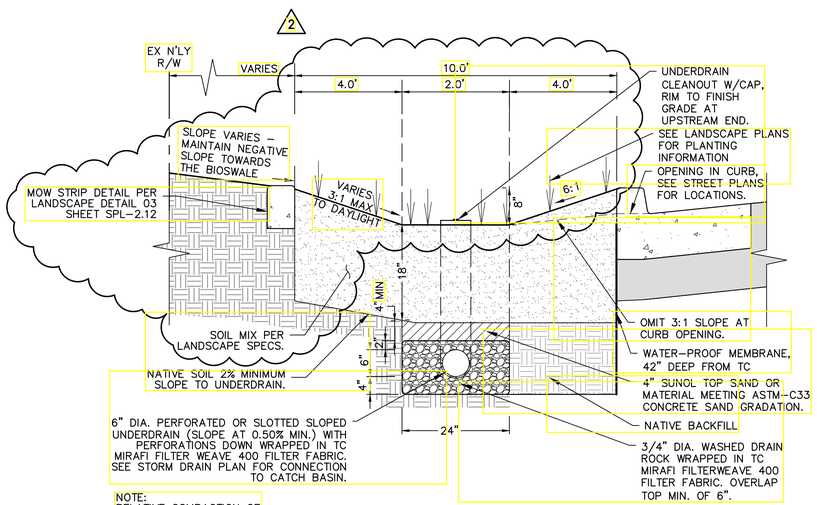
CONSTRUCTION NOTES:

- CONSTRUCT
- EXISTING (PROTECT IN PLACE)
- REMOVE
- REMODEL EXISTING
- REMOVE & RECONSTRUCT
- WORK BY OTHERS

2. 4" PCC SIDEWALK PER CITY OF BEVERLY HILLS STD. PLAN BH 105 AND BH 104. SAWCUT AND JOIN SIDEWALK AT NEAREST JOINT.
7. MODIFIED CONCRETE BUS PAD PER SPPWC STD. PLAN 131-2. (SEE DETAIL ON SHEET 03).
8. ASPHALT CONCRETE (B-PG 70-10 HMA) PAVEMENT (t=6").
9. CRUSHED MISCELLANEOUS BASE (DEPTH PER TYPICAL SECTIONS).
18. 2" THICK ASPHALT CONCRETE (FINISH OVERLAY) PAVEMENT (C2-PG-70-10 HMA).
23. NON-RESIDENTIAL DRIVEWAY APPROACH PER CITY OF BEVERLY HILLS STD. PLAN BH 102.
33. SOD

LEGEND

- PCC
- AC
- CMB
- FLOWLINE
- EXISTING
- EXISTING GROUND
- CENTERLINE
- EXISTING R/W

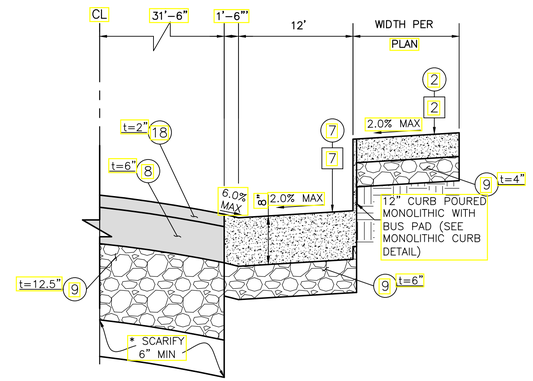


NOTE:
RELATIVE COMPACTION OF SURBGRADE TO BE SIMILAR TO NATIVE SOILS

NORTH SANTA MONICA BOULEVARD VEGETATED BIOSWALE

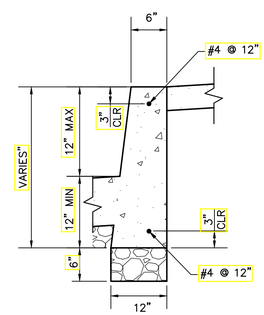
NOT TO SCALE

FROM STA 14+65.39 TO STA 15+86.54
FROM STA 18+55.41 TO STA 19+80.11
FROM STA 48+58.70 TO STA 51+66.65
FROM STA 52+47.83 TO STA 55+63.32
FROM STA 56+41.22 TO STA 59+50.42
FROM STA 60+35.30 TO STA 63+51.49
FROM STA 64+29.55 TO STA 67+38.53
FROM STA 69+57.03 TO STA 71+59.49
FROM STA 72+52.43 TO STA 75+80.25
FROM STA 76+68.12 TO STA 79+89.02
FROM STA 80+88.12 TO STA 83+78.17



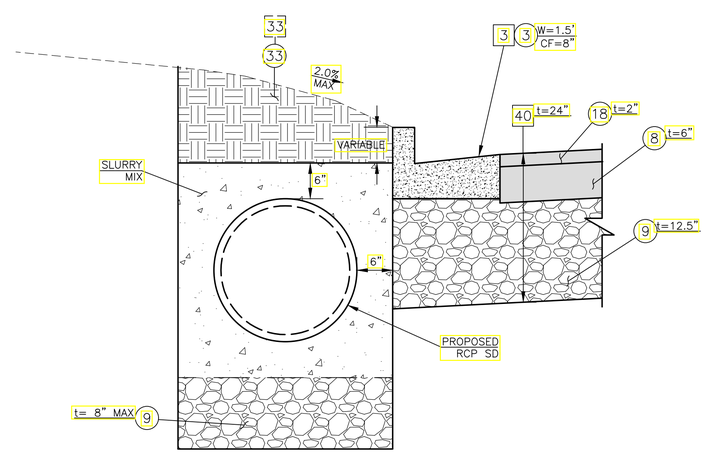
MODIFIED BUS PAD DETAIL

NOT TO SCALE



MONOLITHIC CURB DETAIL

NOT TO SCALE



STORM DRAIN LINE B AND LINE C INSTALLATION ADJACENT TO PROPOSED CURB

FROM STA 12+89 TO STA 26+25
NOT TO SCALE

NOTES

1. PARABOLIC STREET CROSS SECTION SHALL BE CONSTRUCTED PER CITY OF LOS ANGELES DESIGN MANUAL, CROSS SECTION ELEMENTS (E 400).
2. ALL EXISTING IMPROVEMENTS, INCLUDING CURB AND GUTTER, SIDEWALK, ASPHALT CONCRETE OR PCC PAVING THAT ARE BEING JOINED, OR MATCHED IN CONNECTION WITH THE PROJECT, SHALL BE JOINED, OR MATCHED TO THE NEAREST SCORE LINE BEYOND THE NECESSARY WORK LIMIT OR AS DIRECTED BY THE CITY ENGINEER. IN ADDITION, NECESSARY SAWCUTTING, REMOVAL, OR CAPPING, SATISFACTORY TO THE CITY ENGINEER.
3. ALL CONCRETE CURB AND GUTTER, AND PAVEMENT WITH LESS THAN 1% GRADE SHALL BE WATER TESTED PRIOR TO FINAL ACCEPTANCE TO INSURE POSITIVE DRAINAGE WITHOUT LOW SPOTS. IF ANY AREAS ARE IDENTIFIED WHERE PONDING OCCURS, THE CONTRACTOR SHALL REMOVE AND REPLACE THOSE IMPROVEMENTS AT HIS EXPENSE.
4. PCC FOUND A MINIMUM OF 6" BELOW THE FINISH SURFACE SHALL BE PROTECTED IN PLACE. LIMITS TO BE DETERMINED BY CITY INSPECTOR.
5. CONTRACTOR SHALL BACKFILL AND PLACE SOD IN TURF AREAS DAMAGED BY CONSTRUCTION.
6. * SEE SHEETS 27 TO 36 FOR BIOSWALE INVERT AND FINISH SURFACE ELEVATIONS.

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.
Underground Service Alert
Call: TOLL FREE
811
TWO WORKING DAYS BEFORE YOU DIG.

WARNING:
BEFORE STARTING WORK ON EXISTING SERIES STREET LIGHTING CIRCUITS, CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM THE SERVING UTILITY. CUT-OUT PLUGS MUST BE PULLED AND "MEN AT WORK" SIGNS POSTED BEFORE ANY WORK IS DONE OR CONNECTIONS MADE.

PSOMAS
555 South Flower Street, Suite 4300
Los Angeles, CA 90071
(213) 223-1400 (213) 223-1444 (FAX)
CHARLES R. HEFFERNAN PE 40759 04/ 08/ 2016 DATE

REGISTERED PROFESSIONAL ENGINEER CHARLES R. HEFFERNAN NO. 40759 EXP. 03/31/17 CIVIL STATE OF CALIFORNIA

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

CIVIL TYPICAL SECTIONS

WILSHIRE BOULEVARD TO DOHENY DRIVE

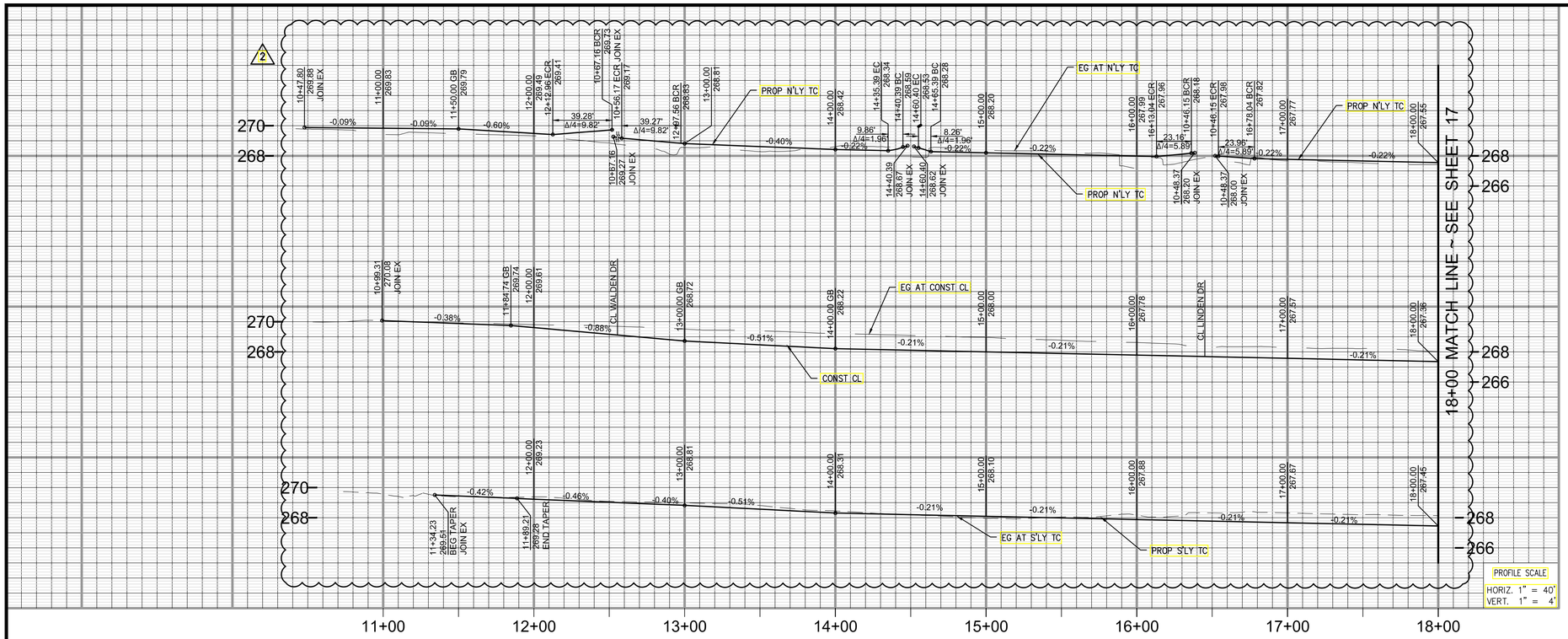
SCALE AS SHOWN			
F.B. NO.	PAGE	TO	
DESIGNED	VH	DATE 12/ 14/ 2015	
DRAWN	HC	DATE 12/ 14/ 2015	
CHECKED	CM	DATE 2/ 16/ 2016	
06/02/16	2 ADDENDUM NO. 2		SA
DATE	REVISION		BY

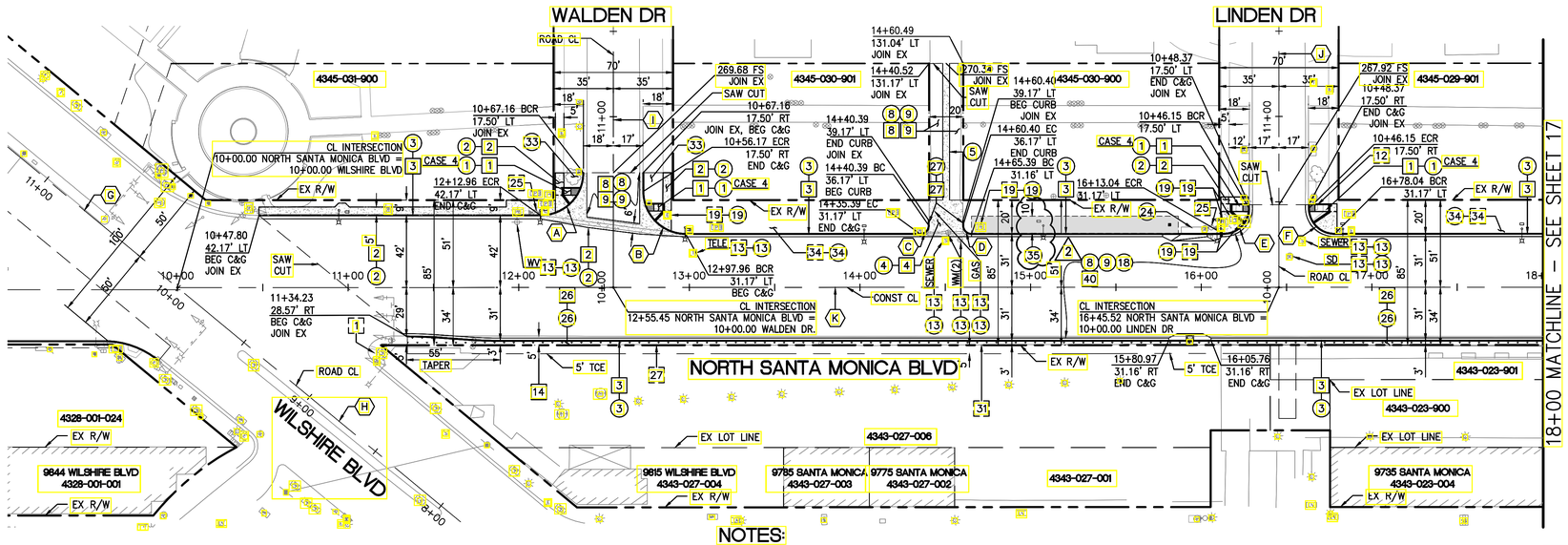
SUBMITTED DATE
APPROVED DATE 04/ 08/ 2016

JOB NO. 2184
DRAWING NO. 7449
SHEET 05 OF 85 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT

DWG Name: W:\BEV041000\Public_Works\Sheets\TYP-03.DWG Plotted by: salman.ahmed on May 27, 2016 – 10:40:53





CONSTRUCTION NOTES:

- CONSTRUCT
- EXISTING (PROTECT IN PLACE)
- REMOVE
- REMODEL EXISTING
- REMOVE & RECONSTRUCT
- WORK BY OTHERS

1. CURB RAMP PER CITY OF BEVERLY HILLS STD. PLAN BH 103 (CASE PER PLAN).
2. 4" PCC SIDEWALK PER CITY OF BEVERLY HILLS STD. PLAN BH 105 AND BH 104. SAWCUT AND JOIN SIDEWALK AT NEAREST JOINT.
3. NON-RESIDENTIAL INTEGRAL CURB AND GUTTER PER CITY OF BEVERLY HILLS STD. PLAN BH 107.
4. ALLEY APPROACH PER CITY OF BEVERLY HILLS STD. PLAN BH 108.
5. LONGITUDINAL ALLEY GUTTER PER CITY OF BEVERLY HILLS STD. PLAN BH 111.
6. CROSS AND LONGITUDINAL GUTTERS PER SPPWC STD. PLAN 122-2.
8. ASPHALT CONCRETE (B-PG 70-10 HMA) PAVEMENT (t=6").
9. CRUSHED MISCELLANEOUS BASE (DEPTH PER TYPICAL SECTIONS).
12. SURVEY MONUMENTS ADJUST TO FINISH SURFACE PER BEVERLY HILLS STD. PLAN BH 605.
13. MANHOLE, METER, OR VALVE TO GRADE.
14. UNCLASSIFIED EXCAVATION.
18. 2" THICK ASPHALT CONCRETE (FINISH OVERLAY) PAVEMENT (C2-PG-70-10 HMA).
19. ELECTRICAL VAULT, ELECTRICAL CABINET, AND TSPB PER TRAFFIC SIGNAL AND STREET LIGHTING PLANS.
24. CATCH BASIN PER STORM DRAIN IMPROVEMENT PLANS.
25. FIRE HYDRANT PER CITY OF BEVERLY HILLS STD. PLAN BH 704
26. LANDSCAPING PER LANDSCAPE PLANS.
27. CONCRETE CURB PER SPPWC STD PLAN 120-2, TYPE A1-6.
28. TREE AND TREE WELL.
31. FENCE
33. SOD
34. EXISTING IRRIGATION SPRINKLER SYSTEM
35. VEGETATED BIOSWALE (SEE SHEET 05 FOR DETAIL AND LIMITS)
40. EXISTING PAVEMENT (AC, BASE, PCC, AND SUBBASE) DEPTH PER TYPICAL SECTION.

LEGEND

- PCC
- PER LANDSCAPE PLANS
- BIOSWALE
- SAWCUT

LINE / CURVE TABLE

#	DELTA/BRG	RADIUS	LENGTH	TANGENT
A	89°59'26"	25.00'	39.27'	25.00'
B	90°00'34"	25.00'	39.27'	25.00'
C	90°00'00"	3.00'	4.71'	3.00'
D	90°00'00"	3.00'	4.71'	3.00'
E	89°58'38"	15.00'	23.56'	14.99'
F	90°01'22"	15.00'	23.57'	15.01'
G	N 89°41'30" W	–	1809.11'	–
H	N 89°42'19" W	–	833.46'	–
I	N 39°17'41" W	–	306.60'	–
J	N 39°16'53" W	–	306.47'	–
K	N 50°41'45" E	–	1035.64'	–

40' 20' 0' 40' 80'
SCALE IN FEET
SCALE: 1" = 40'

NOTES:

1. LOCATION OF EXISTING UTILITIES ARE APPROXIMATE AND DEPTH ARE UNKNOWN. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO THE START OF EXCAVATION. CONTRACTOR SHALL TAKE CARE DURING EXCAVATION AND PROTECT IN PLACE ALL UTILITIES ENCOUNTERED. DAMAGED UTILITY FACILITIES SHALL BE REPAIRED AT NO ADDITIONAL COST.
2. CONST CL DOES NOT REPRESENT THE RECORDED ROAD CL ON NORTH SANTA MONICA BLVD. SEE TYPICAL SECTIONS FOR CENTERLINE ADJUSTMENTS.
3. SEE SHEETS 27 TO 46 FOR STORM DRAIN AND CATCH BASIN IMPROVEMENTS.
4. FOR ALL SIGNAL AND STREET LIGHTING EQUIPMENT REMOVALS, ADJUSTMENTS, AND PLACEMENT SEE TRAFFIC SIGNAL AND LIGHTING PLANS. (SHEETS 47 TO 61)
5. CONTRACTOR SHALL BACKFILL AND PLACE SOD IN TURF AREAS DAMAGED BY THE CONSTRUCTION.
6. LANDSCAPE ARCHITECT/ CITY ARBORIST SHALL "TAG" THE SPECIFIC TREES TO BE REMOVED PRIOR TO BIDDING. SEE LANDSCAPING PLANS AND SPECIAL PROVISIONS.

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

Underground Service Alert
Call: TOLL FREE
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TWO WORKING DAYS BEFORE YOU DIG

WARNING:
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REGISTERED PROFESSIONAL ENGINEER CHARLES R. HEFFERNAN NO. 40759 EXP. 03/31/17 CIVIL STATE OF CALIFORNIA

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F.B. NO.	PAGE	TO	
DESIGNED	VH	DATE	12/ 14/ 2015
DRAWN	HC	DATE	12/ 14/ 2015
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06/02/16	2 ADDENDUM NO. 2		VH
DATE	REVISION		BY

PSOMAS
555 South Flower Street, Suite 4300
Los Angeles, CA 90071
(213) 223-1400 (213) 223-1444 (FAX)
CHARLES R. HEFFERNAN PE 40759 04/ 08/ 2016 DATE

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

CIVIL IMPROVEMENTS

STA 10+00.00 TO STA 18+00.00
WILSHIRE BOULEVARD TO DOHENY DRIVE

SUBMITTED DATE
APPROVED DATE 04/ 08/ 2016

JOB NO. 2184
DRAWING NO. 7449
SHEET 16 OF 85 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT

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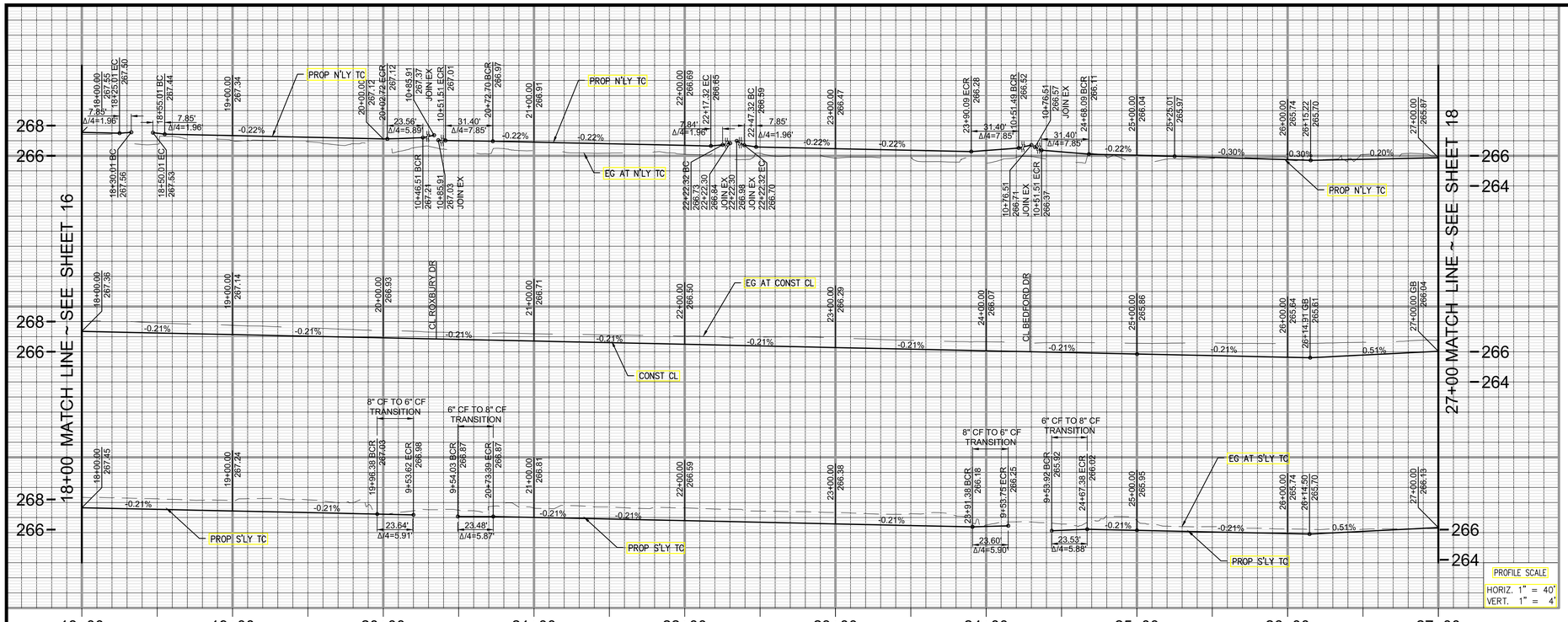

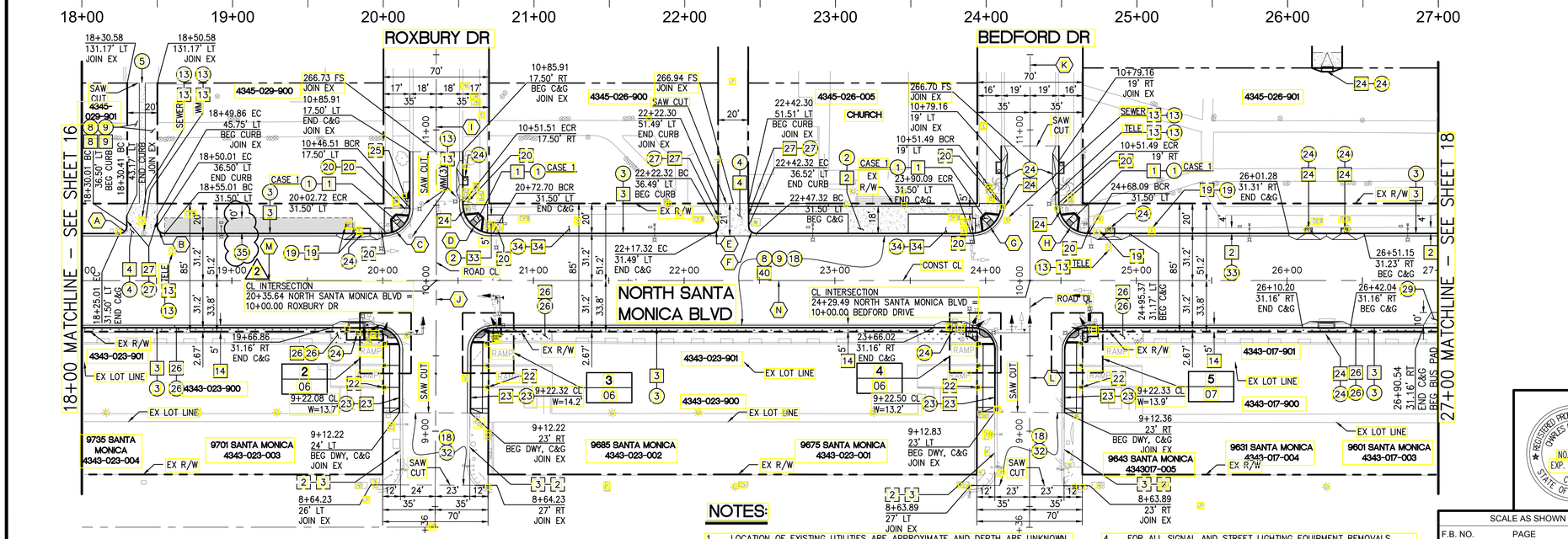

CONSTRUCTION NOTES:

- CONSTRUCT
- REMODEL EXISTING
- EXISTING (PROTECT IN PLACE)
- REMOVE & RECONSTRUCT
- REMOVE
- WORK BY OTHERS

1. CURB RAMP PER CITY OF BEVERLY HILLS STD. PLAN BH 103 (CASE PER PLAN).
2. 4" PCC SIDEWALK PER CITY OF BEVERLY HILLS STD. PLAN BH 105 AND BH 104. SAWCUT AND JOIN SIDEWALK AT NEAREST JOINT.
3. NON-RESIDENTIAL INTEGRAL CURB AND GUTTER PER CITY OF BEVERLY HILLS STD. PLAN BH 107.
4. ALLEY APPROACH PER CITY OF BEVERLY HILLS STD. PLAN BH 108.
5. LONGITUDINAL ALLEY GUTTER PER CITY OF BEVERLY HILLS STD. PLAN BH 111.
8. ASPHALT CONCRETE (B-PG 70-10 HMA) PAVEMENT (t=6"). 2
9. CRUSHED MISCELLANEOUS BASE (DEPTH PER TYPICAL SECTIONS).
13. MANHOLE, METER, OR VALVE TO GRADE.
14. UNCLASSIFIED EXCAVATION.
18. 2" THICK ASPHALT CONCRETE (FINISH OVERLAY) PAVEMENT (C2-PG-70-10 HMA). 2
19. ELECTRICAL VAULT, ELECTRICAL CABINET, AND TSPB PER TRAFFIC SIGNAL AND STREET LIGHTING PLANS.
20. TRAFFIC SIGNAL POLES/ LIGHT POLES PER TRAFFIC SIGNAL AND LIGHTING PLANS.
21. PEDESTRIAN PUSH BUTTON PER TRAFFIC SIGNAL PLANS.
22. BOLLARDS.
23. NON-RESIDENTIAL DRIVEWAY APPROACH PER CITY OF BEVERLY HILLS STD. PLAN BH 102.
24. CATCH BASIN PER STORM DRAIN IMPROVEMENT PLANS.
25. FIRE HYDRANT PER CITY OF BEVERLY HILLS STD. PLAN BH 704
26. LANDSCAPING PER LANDSCAPE PLANS.
27. CONCRETE CURB PER SPPWC STD PLAN 120-2, TYPE A1-6.
29. CONCRETE BUS PAD PER SPPWC STD. PLAN 131-2.
32. COLDMILL 2" AC PAVEMENT.
33. SOD
34. EXISTING IRRIGATION SPRINKLER SYSTEM
35. VEGETATED BIOSWALE (SEE SHEET 05 FOR DETAIL AND LIMITS)
40. EXISTING PAVEMENT (AC, BASE, PCC, AND SUBBASE) DEPTH PER TYPICAL SECTION.

LEGEND

- PCC
- PER LANDSCAPE PLANS
- BIOSWALE
- SAWCUT

LINE / CURVE TABLE

#	DELTA/BRG	RADIUS	LENGTH	TANGENT
A	90°00'00"	5.00'	7.85'	5.00'
B	90°00'00"	5.00'	7.85'	5.00'
C	90°01'14"	15.00'	23.57'	15.01'
D	89°57'53"	20.00'	31.40'	19.99'
E	89°51'16"	5.00'	7.84'	4.99'
F	90°08'44"	5.00'	7.87'	5.01'
G	89°59'30"	20.00'	31.41'	20.00'
H	90°00'30"	20.00'	31.42'	20.00'
I	N 39°19'31" W	–	299.84'	–
J	N 38°59'30" W	–	164.84'	–
K	N 39°16'47" W	–	289.89'	–
L	N 39°09'31" W	–	164.96'	–
M	N 50°41'45" E	–	1035.64'	–
N	N 50°42'38" E	–	1990.43'	–

SCALE IN FEET
SCALE: 1" = 40'

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

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WARNING:

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NOTES:

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2. CONST CL DOES NOT REPRESENT THE RECORDED ROAD CL ON NORTH SANTA MONICA BLVD. SEE TYPICAL SECTIONS FOR CENTERLINE ADJUSTMENTS.
3. SEE SHEETS 27 TO 46 FOR STORM DRAIN AND CATCH BASIN IMPROVEMENTS.
4. FOR ALL SIGNAL AND STREET LIGHTING EQUIPMENT REMOVALS, ADJUSTMENTS, AND PLACEMENT SEE TRAFFIC SIGNAL AND LIGHTING PLANS. (SHEETS 47 TO 61)
5. CONTRACTOR SHALL BACKFILL AND PLACE SOD IN TURF AREAS DAMAGED BY THE CONSTRUCTION.
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REGISTERED PROFESSIONAL ENGINEER CHARLES R. HEFFERNAN NO. 40759 EXP. 03/31/17 CIVIL STATE OF CALIFORNIA

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PSOMAS
555 South Flower Street, Suite 4300
Los Angeles, CA 90071
(213) 223-1400 (213) 223-1444 (FAX)
CHARLES R. HEFFERNAN PE 40759 04/ 08/ 2016 DATE

PROJECT:

NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

CIVIL IMPROVEMENTS

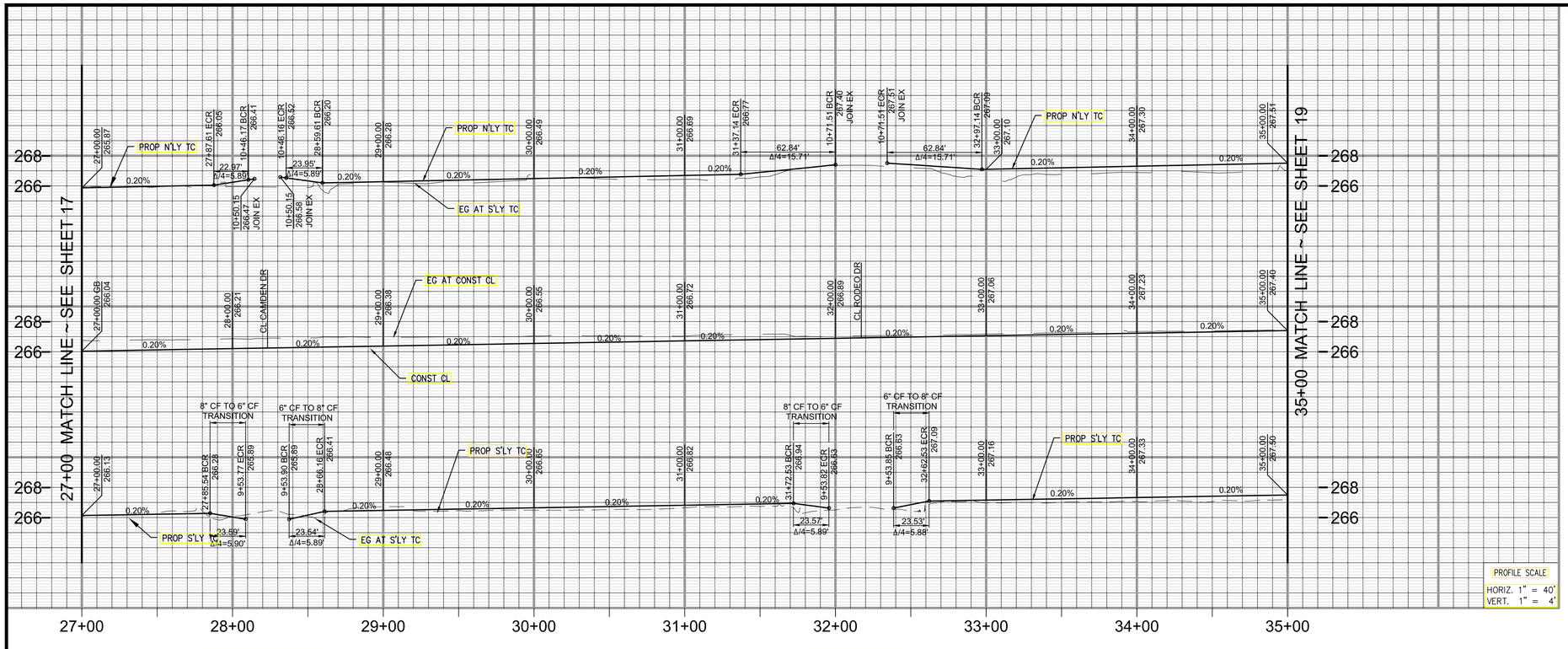
STA 18+00.00 TO STA 27+00.00
WILSHIRE BOULEVARD TO DOHENY DRIVE

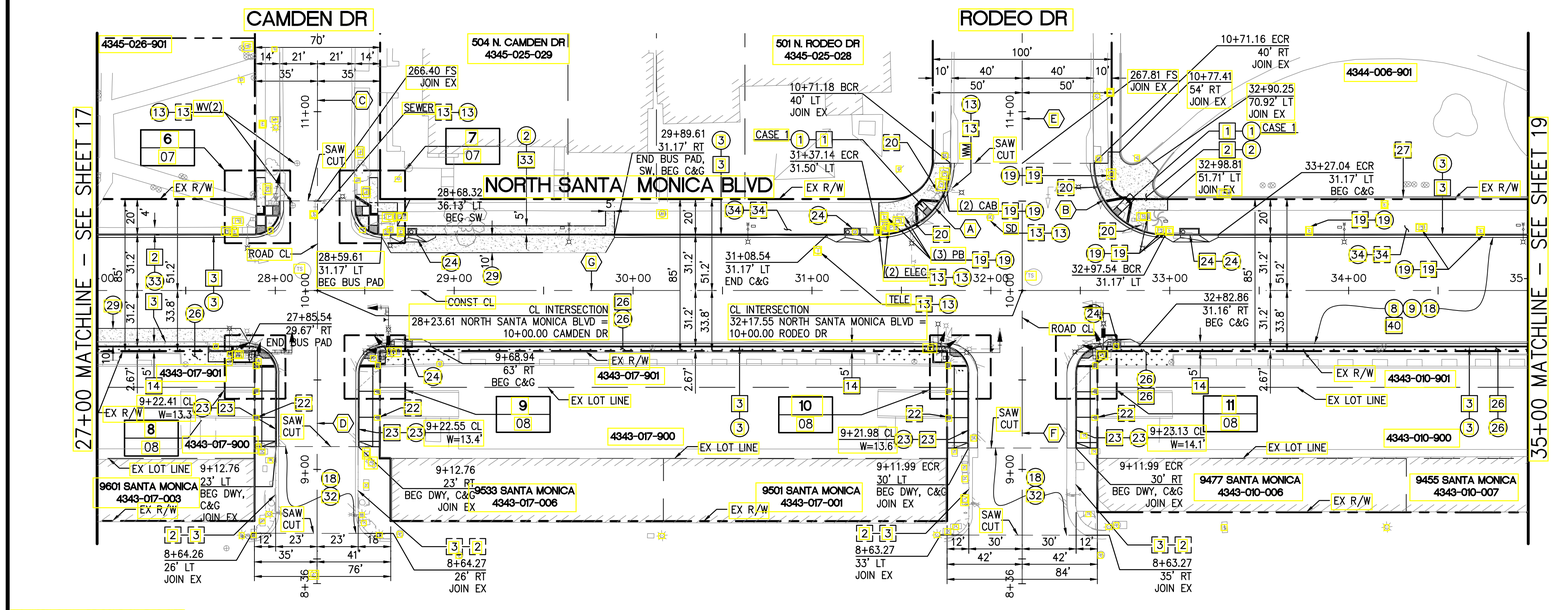
SUBMITTED DATE
APPROVED DATE 04/ 08/ 2016

JOB NO. 2184
DRAWING NO. 7449
SHEET 17 OF 85 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT

DWG Name: W:\VBEV041000\Public_Works\Sheets\RD-02.DWG Plotted by: vincent.hellens on May 23, 2016 – 19:36:02





CONSTRUCTION NOTES:

- CONSTRUCT
- EXISTING (PROTECT IN PLACE)
- REMOVE
- REMODEL EXISTING
- REMOVE & RECONSTRUCT
- WORK BY OTHERS

1. CURB RAMP PER CITY OF BEVERLY HILLS STD. PLAN BH 103 (CASE PER PLAN).
2. 4" PCC SIDEWALK PER CITY OF BEVERLY HILLS STD. PLAN BH 105 AND BH 104. SAWCUT AND JOIN SIDEWALK AT NEAREST JOINT.
3. NON-RESIDENTIAL INTEGRAL CURB AND GUTTER PER CITY OF BEVERLY HILLS STD. PLAN BH 107.
8. ASPHALT CONCRETE (B-PG 70-10 HMA) PAVEMENT (t=6").
9. CRUSHED MISCELLANEOUS BASE (DEPTH PER TYPICAL SECTIONS).
13. MANHOLE, METER, OR VALVE TO GRADE.
14. UNCLASSIFIED EXCAVATION.
18. 2" THICK ASPHALT CONCRETE (FINISH OVERLAY) PAVEMENT (C2-PG-70-10 HMA).
19. ELECTRICAL VAULT, ELECTRICAL CABINET, AND TSPB PER TRAFFIC SIGNAL AND STREET LIGHTING PLANS.
20. TRAFFIC SIGNAL POLES/ LIGHT POLES PER TRAFFIC SIGNAL AND LIGHTING PLANS.
22. BOLLARDS.
23. NON-RESIDENTIAL DRIVEWAY APPROACH PER CITY OF BEVERLY HILLS STD. PLAN BH 102.
24. CATCH BASIN PER STORM DRAIN IMPROVEMENT PLANS.
26. LANDSCAPING PER LANDSCAPE PLANS.
27. CONCRETE CURB PER SPPWC STD PLAN 120-2, TYPE A1-6.
28. TREE AND TREE WELL.
29. CONCRETE BUS PAD PER SPPWC STD. PLAN 131-2.
32. COLDMILL 2" AC PAVEMENT.
33. SOD
34. EXISTING IRRIGATION SPRINKLER SYSTEM
40. EXISTING PAVEMENT (AC, BASE, PCC, AND SUBBASE) DEPTH PER TYPICAL SECTION.

LEGEND

- PCC
- PER LANDSCAPE PLANS
- BIOSWALE
- SAWCUT

LINE / CURVE TABLE

#	DELTA/BRG	RADIUS	LENGTH	TANGENT
A	90°00'31"	40.00'	62.84'	40.01'
B	89°59'29"	40.00'	62.83'	39.99'
C	N 39°17'42" W	–	289.82'	–
D	N 39°11'34" W	–	165.02'	–
E	N 39°17'53" W	–	289.90'	–
F	N 39°16'00" W	–	165.05'	–
G	N 50°42'38" E	–	1990.43'	–

NOTES:

1. LOCATION OF EXISTING UTILITIES ARE APPROXIMATE AND DEPTH ARE UNKNOWN. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO THE START OF EXCAVATION. CONTRACTOR SHALL TAKE CARE DURING EXCAVATION AND PROTECT IN PLACE ALL UTILITIES ENCOUNTERED. DAMAGED UTILITY FACILITIES SHALL BE REPAIRED AT NO ADDITIONAL COST.
2. CONST CL DOES NOT REPRESENT THE RECORDED ROAD CL ON NORTH SANTA MONICA BLVD. SEE TYPICAL SECTIONS FOR CENTERLINE ADJUSTMENTS.
3. SEE SHEETS 27 TO 46 FOR STORM DRAIN AND CATCH BASIN IMPROVEMENTS.
4. FOR ALL SIGNAL AND STREET LIGHTING EQUIPMENT REMOVALS, ADJUSTMENTS, AND PLACEMENT SEE TRAFFIC SIGNAL AND LIGHTING PLANS. (SHEETS 47 TO 61)
5. CONTRACTOR SHALL BACKFILL AND PLACE SOD IN TURF AREAS DAMAGED BY THE CONSTRUCTION.
6. LANDSCAPE ARCHITECT/ CITY ARBORIST SHALL "TAG" THE SPECIFIC TREES TO BE REMOVED PRIOR TO BIDDING. SEE LANDSCAPING PLANS AND SPECIAL PROVISIONS.

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

Underground Service Alert
Call: TOLL FREE
811
TWO WORKING DAYS BEFORE YOU DIG

WARNING:
BEFORE STARTING WORK ON EXISTING SERIES STREET LIGHTING CIRCUITS, CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM THE SERVING UTILITY. CUT-OUT PLUGS MUST BE PULLED AND "MEN AT WORK" SIGNS POSTED BEFORE ANY WORK IS DONE OR CONNECTIONS MADE.

SCALE IN FEET
SCALE: 1" = 40'

PSOMAS
555 South Flower Street, Suite 4300
Los Angeles, CA 90071
(213) 223-1400 (213) 223-1444 (FAX)
CHARLES R. HEFFERNAN PE 40759 04/ 08/ 2016 DATE

REGISTERED PROFESSIONAL ENGINEER CHARLES R. HEFFERNAN NO. 40759 EXP. 03/31/17 CIVIL STATE OF CALIFORNIA

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

CIVIL IMPROVEMENTS

STA 27+00.00 TO STA 35+00.00
WILSHIRE BOULEVARD TO DOHENY DRIVE

SCALE AS SHOWN

F.B. NO.	PAGE	TO
DESIGNED	VH	DATE 12/ 14/ 2015
DRAWN	HC	DATE 12/ 14/ 2015
CHECKED	CM	DATE 2/ 16/ 2016

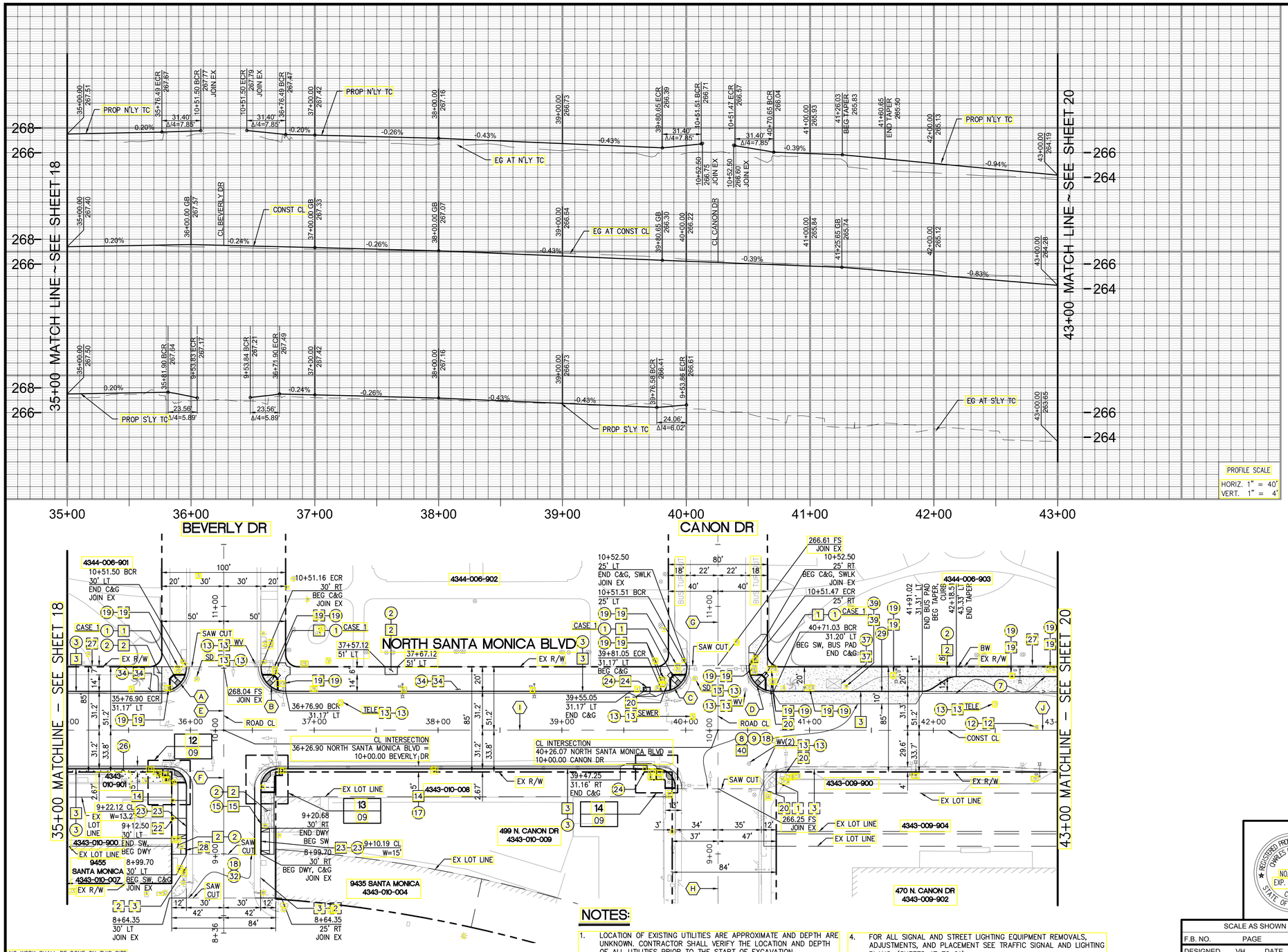
DATE	REVISION	BY
06/02/16	2 ADDENDUM NO. 2	VH

SUBMITTED DATE
APPROVED DATE 04/ 08/ 2016

JOB NO. 2184
DRAWING NO. 7449
SHEET 18 OF 85 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT

DWG Name: W:\BEV041000\Public_Works\Sheets\FD-03.dwg Plotted by: vincent.hellens on May 23, 2016 – 19:40:41



CONSTRUCTION NOTES:

- CONSTRUCT
- REMODEL EXISTING
- EXISTING (PROTECT IN PLACE)
- REMOVE & RECONSTRUCT
- REMOVE
- WORK BY OTHERS

1. CURB RAMP PER CITY OF BEVERLY HILLS STD. PLAN BH 103 (CASE PER PLAN).
2. 4" PCC SIDEWALK PER CITY OF BEVERLY HILLS STD. PLAN BH 105 AND BH 104. SAWCUT AND JOIN SIDEWALK AT NEAREST JOINT.
3. NON-RESIDENTIAL INTEGRAL CURB AND GUTTER PER CITY OF BEVERLY HILLS STD. PLAN BH 107.
7. MODIFIED CONCRETE BUS PAD PER SPPWC STD. PLAN 131-2. (SEE DETAIL ON SHEET 03).
8. ASPHALT CONCRETE (B-PG 70-10 HMA) PAVEMENT (t=6"). (2)
9. CRUSHED MISCELLANEOUS BASE (DEPTH PER TYPICAL SECTIONS).
12. SURVEY MONUMENTS ADJUST TO FINISH SURFACE PER BEVERLY HILLS STD. PLAN BH 605.
13. MANHOLE, METER, OR VALVE TO GRADE.
14. UNCLASSIFIED EXCAVATION.
15. 4" CURB DRAIN IN 8" CURB PER BEVERLY HILLS STD. PLAN BH 109.
17. GRADE ONLY (90% COMPACTION).
18. 2" THICK ASPHALT CONCRETE (FINISH OVERLAY) PAVEMENT (C2-PG-70-10 HMA). (2)
19. ELECTRICAL VAULT, ELECTRICAL CABINET, AND TSPB PER TRAFFIC SIGNAL AND STREET LIGHTING PLANS.
20. TRAFFIC SIGNAL POLES/ LIGHT POLES PER TRAFFIC SIGNAL AND LIGHTING PLANS.
22. BOLLARDS.
23. NON-RESIDENTIAL DRIVEWAY APPROACH PER CITY OF BEVERLY HILLS STD. PLAN BH 102.
24. CATCH BASIN PER STORM DRAIN IMPROVEMENT PLANS.
26. LANDSCAPING PER LANDSCAPE PLANS.
27. CONCRETE CURB PER SPPWC STD PLAN 120-2, TYPE A1-6.
28. TREE AND TREE WELL.
29. CONCRETE BUS PAD PER SPPWC STD. PLAN 131-2.
32. COLDMILL 2" AC PAVEMENT.
34. EXISTING IRRIGATION SPRINKLER SYSTEM
37. BUS FURNITURE
39. SIGN PER SIGNING AND STRIPING PLANS
40. EXISTING PAVEMENT (AC, BASE, PCC, AND SUBBASE) DEPTH PER TYPICAL SECTION.

LEGEND

- PCC
- PER LANDSCAPE PLANS
- FLOWLINE
- SAWCUT

LINE / CURVE TABLE

#	DELTA/BRG	RADIUS	LENGTH	TANGENT
A	90°00'18"	20.00'	31.42'	20.00'
B	89°59'42"	20.00'	31.42'	20.00'
C	90°01'26"	20.00'	31.42'	20.01'
D	89°58'34"	20.00'	31.41	19.99'
E	N 39°17'41" W	-	289.75'	-
F	N 39°17'05" W	-	165.13'	-
G	N 39°18'48" W	-	290.03'	-
H	N 39°18'11" W	-	258.46'	-
I	N 50°42'38" E	-	1990.43'	-
J	N 50°45'31" E	-	399.17'	-

NOTES:

1. LOCATION OF EXISTING UTILITIES ARE APPROXIMATE AND DEPTH ARE UNKNOWN. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO THE START OF EXCAVATION. CONTRACTOR SHALL TAKE CARE DURING EXCAVATION AND PROTECT IN PLACE ALL UTILITIES ENCOUNTERED. DAMAGED UTILITY FACILITIES SHALL BE REPAIRED AT NO ADDITIONAL COST.
2. CONST CL DOES NOT REPRESENT THE RECORDED ROAD CL ON NORTH SANTA MONICA BLVD. SEE TYPICAL SECTIONS FOR CENTERLINE ADJUSTMENTS.
3. SEE SHEETS 27 TO 46 FOR STORM DRAIN AND CATCH BASIN IMPROVEMENTS.
4. FOR ALL SIGNAL AND STREET LIGHTING EQUIPMENT REMOVALS, ADJUSTMENTS, AND PLACEMENT SEE TRAFFIC SIGNAL AND LIGHTING PLANS. (SHEETS 47 TO 61)
5. CONTRACTOR SHALL BACKFILL AND PLACE SOD IN TURF AREAS DAMAGED BY THE CONSTRUCTION.
6. LANDSCAPE ARCHITECT/ CITY ARBORIST SHALL "TAG" THE SPECIFIC TREES TO BE REMOVED PRIOR TO BIDDING. SEE LANDSCAPING PLANS AND SPECIAL PROVISIONS.

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

Underground Service Alert
Call: TOLL FREE
811
TWO WORKING DAYS BEFORE YOU DIG

WARNING:
BEFORE STARTING WORK ON EXISTING SERIES STREET LIGHTING CIRCUITS, CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM THE SERVING UTILITY. CUT-OUT PLUGS MUST BE PULLED AND "MEN AT WORK" SIGNS POSTED BEFORE ANY WORK IS DONE OR CONNECTIONS MADE.

REGISTERED PROFESSIONAL ENGINEER CHARLES R. HEFFERNAN NO. 40759 EXP. 03/31/17 CIVIL STATE OF CALIFORNIA

SCALE AS SHOWN			
F.B. NO.	PAGE	TO	
DESIGNED	VH	DATE	12/ 14/ 2015
DRAWN	HC	DATE	12/ 14/ 2015
CHECKED	CM	DATE	2/ 16/ 2016

DATE	REVISION	BY
06/02/16	2 ADDENDUM NO. 2	VH

PSOMAS
555 South Flower Street, Suite 4300
Los Angeles, CA 90071
(213) 223-1400 (213) 223-1444 (FAX)
CHARLES R. HEFFERNAN PE 40759 DATE 04/ 08/ 2016

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

CIVIL IMPROVEMENTS

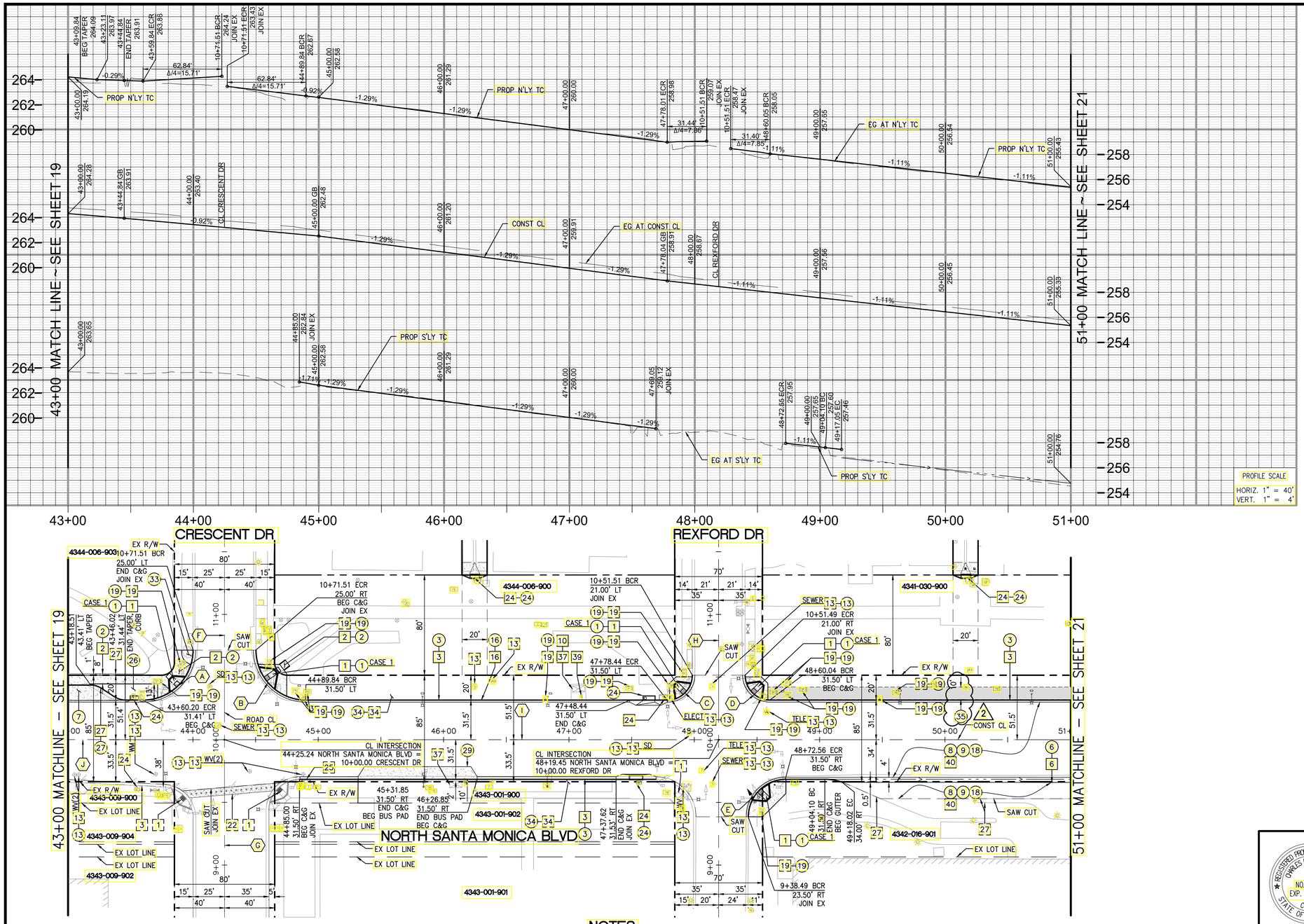
STA 35+00.00 TO STA 43+00.00
WILSHIRE BOULEVARD TO DOHENY DRIVE

SUBMITTED _____ DATE _____
APPROVED _____ DATE 04/ 08/ 2016

JOB NO. 2184
DRAWING NO. 7449
SHEET 19 OF 85 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT

DWG Name: W:\BEV041000\Public_Works\Sheets\RD-04.DWG Plotted by: vincent.hellens on May 23, 2016 - 19:45:06



CONSTRUCTION NOTES:

- CONSTRUCT
- EXISTING (PROTECT IN PLACE)
- REMOVE
- REMODEL EXISTING
- REMOVE & RECONSTRUCT
- WORK BY OTHERS

1. CURB RAMP PER CITY OF BEVERLY HILLS STD. PLAN BH 103 (CASE PER PLAN).
2. 4" PCC SIDEWALK PER CITY OF BEVERLY HILLS STD. PLAN BH 105 AND BH 104. SAWCUT AND JOIN SIDEWALK AT NEAREST JOINT.
3. NON-RESIDENTIAL INTEGRAL CURB AND GUTTER PER CITY OF BEVERLY HILLS STD. PLAN BH 107.
7. MODIFIED CONCRETE BUS PAD PER SPPWC STD. PLAN 131-2. (SEE DETAIL ON SHEET 03).
8. ASPHALT CONCRETE (B-PG 70-10 HMA) PAVEMENT (t=6").
9. CRUSHED MISCELLANEOUS BASE (DEPTH PER TYPICAL SECTIONS).
10. PORTLAND CEMENT CONCRETE (t=8").
13. MANHOLE, METER, OR VALVE TO GRADE.
14. UNCLASSIFIED EXCAVATION.
16. PARKWAY DRAIN PER BEVERLY HILLS STD. PLAN BH 110.
18. 2" THICK ASPHALT CONCRETE (FINISH OVERLAY) PAVEMENT (C2-PG-70-10 HMA).
19. ELECTRICAL VAULT, ELECTRICAL CABINET, AND TSPB PER TRAFFIC SIGNAL AND STREET LIGHTING PLANS.
22. BOLLARDS.
24. CATCH BASIN PER STORM DRAIN IMPROVEMENT PLANS.
25. FIRE HYDRANT PER CITY OF BEVERLY HILLS STD. PLAN BH 704
26. LANDSCAPING PER LANDSCAPE PLANS.
27. CONCRETE CURB PER SPPWC STD PLAN 120-2, TYPE A1-6.
29. CONCRETE BUS PAD PER SPPWC STD. PLAN 131-2.
33. SOD
34. EXISTING IRRIGATION SPRINKLER SYSTEM
35. VEGETATED BIOSWALE (SEE SHEET 05 FOR DETAIL AND LIMITS)
37. BUS FURNITURE
39. SIGN PER SIGNING AND STRIPING PLANS
40. EXISTING PAVEMENT (AC, BASE, PCC, AND SUBBASE) DEPTH PER TYPICAL SECTION.

LEGEND

- PCC
- BIOSWALE
- FLOWLINE
- SAWCUT

LINE / CURVE TABLE

#	DELTA/BRG	RADIUS	LENGTH	TANGENT
A	90°00'10"	40.00'	62.83'	40.00'
B	89°59'50"	40.00'	62.83'	40.00'
C	90°00'46"	20.00'	31.42'	20.00'
D	89°59'14"	20.00'	31.41'	20.00'
E	90°00'48"	30.00'	47.13'	30.01'
F	N 39°17'33" W	–	289.89'	–
G	N 39°18'37" W	–	215.25'	–
H	N 39°18'08" W	–	505.03'	–
I	N 50°42'38" E	–	4656.67'	–
J	N 50°45'31" E	–	399.17'	–

40' 20' 0' 40' 80'
SCALE IN FEET
SCALE: 1" = 40'

NOTES:

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2. CONST CL DOES NOT REPRESENT THE RECORDED ROAD CL ON NORTH SANTA MONICA BLVD. SEE TYPICAL SECTIONS FOR CENTERLINE ADJUSTMENTS.
3. SEE SHEETS 27 TO 46 FOR STORM DRAIN AND CATCH BASIN IMPROVEMENTS.
4. FOR ALL SIGNAL AND STREET LIGHTING EQUIPMENT REMOVALS, ADJUSTMENTS, AND PLACEMENT SEE TRAFFIC SIGNAL AND LIGHTING PLANS. (SHEETS 47 TO 61)
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TWO WORKING DAYS BEFORE YOU DIG

WARNING:
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REGISTERED PROFESSIONAL ENGINEER CHARLES R. HEFFERNAN NO. 40759 EXP. 03/31/17 CIVIL STATE OF CALIFORNIA

PSOMAS
555 South Flower Street, Suite 4300
Los Angeles, CA 90071
(213) 223-1400 (213) 223-1444 (FAX)
CHARLES R. HEFFERNAN PE 40759 04/ 08/ 2016 DATE

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

CIVIL IMPROVEMENTS

STA 43+00.00 TO STA 51+00.00
WILSHIRE BOULEVARD TO DOHENY DRIVE

SCALE AS SHOWN

F.B. NO.	PAGE	TO	
DESIGNED	VH	DATE	12/ 14/ 2015
DRAWN	HC	DATE	12/ 14/ 2015
CHECKED	CM	DATE	2/ 16/ 2016

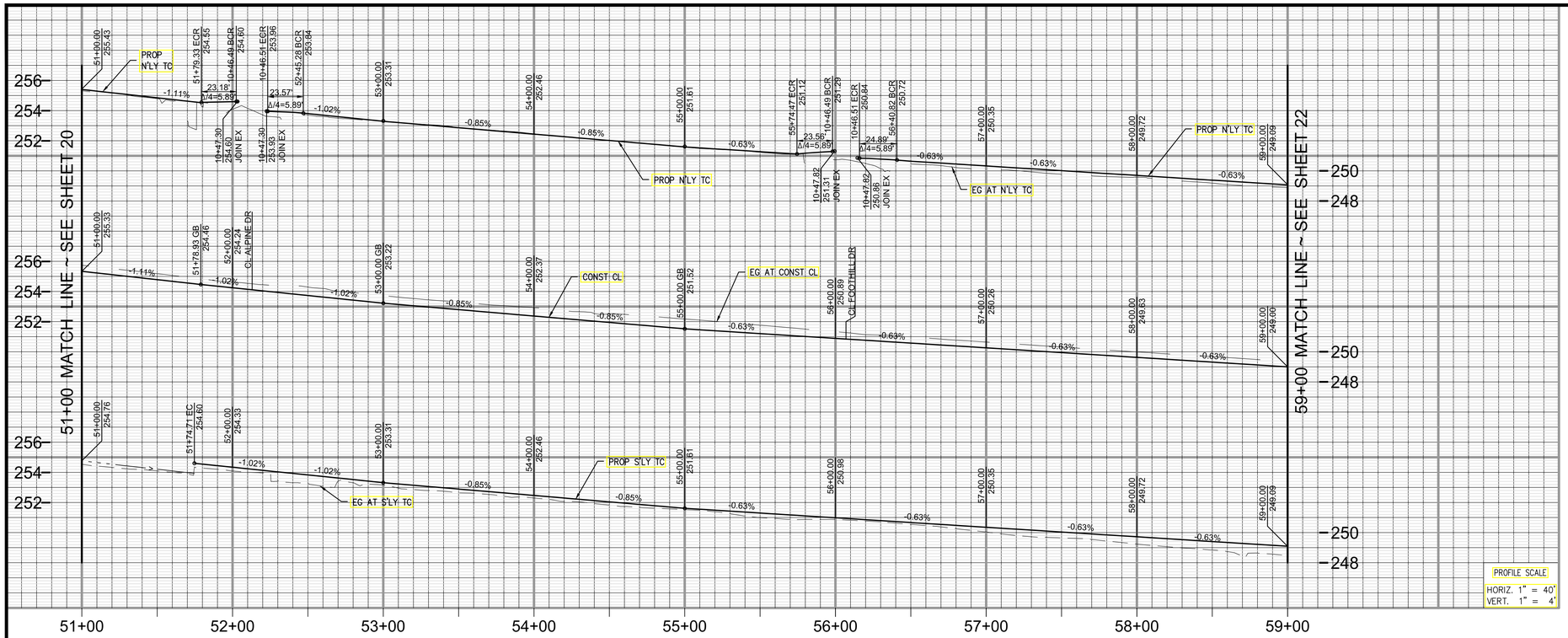
DATE	REVISION	BY
06/02/16	2 ADDENDUM NO. 2	VH

SUBMITTED DATE
APPROVED DATE 04/ 08/ 2016

JOB NO. 2184
DRAWING NO. 7449
SHEET 20 OF 85 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT

DWG Name: W:\BEV041000\Public_Works\Sheets\RD-05.DWG Plotted by: vincent.hellens on May 23, 2016 – 19:49:37



CONSTRUCTION NOTES:

- CONSTRUCT
- EXISTING (PROTECT IN PLACE)
- REMOVE
- REMODEL EXISTING
- REMOVE & RECONSTRUCT
- WORK BY OTHERS

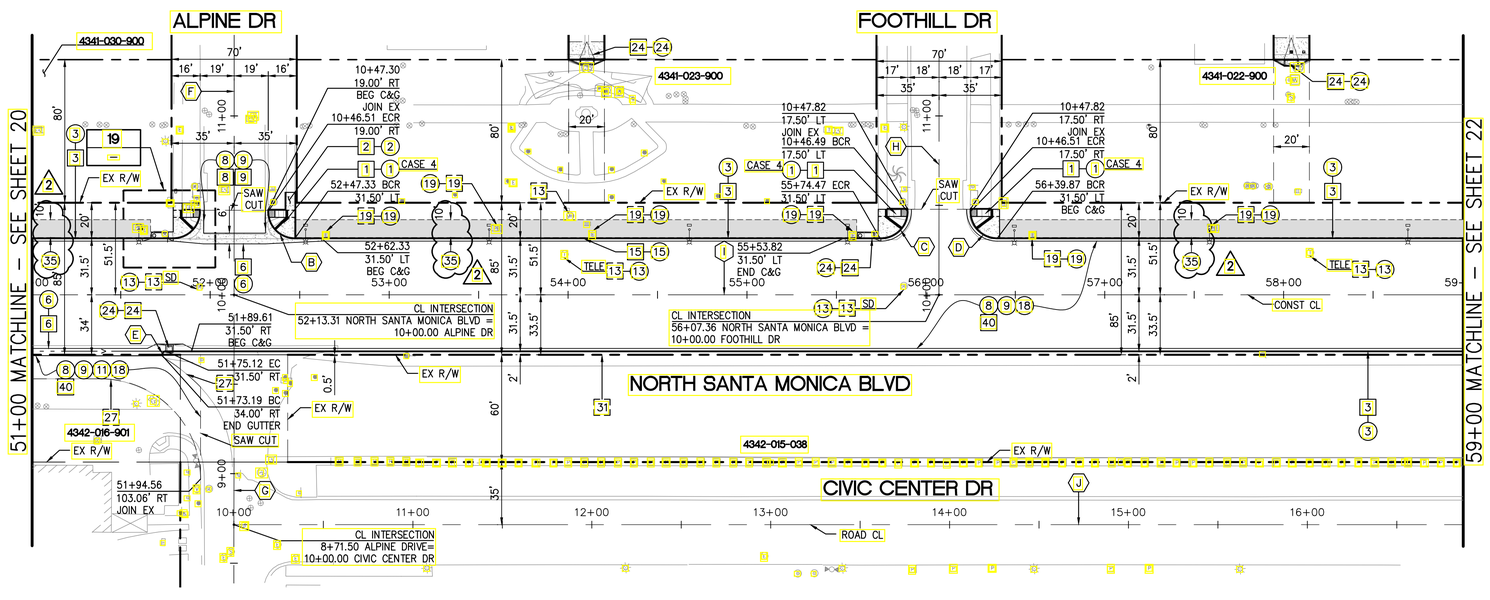
1. CURB RAMP PER CITY OF BEVERLY HILLS STD. PLAN BH 103 (CASE PER PLAN).
2. 4" PCC SIDEWALK PER CITY OF BEVERLY HILLS STD. PLAN BH 105 AND BH 104. SAWCUT AND JOIN SIDEWALK AT NEAREST JOINT.
3. NON-RESIDENTIAL INTEGRAL CURB AND GUTTER PER CITY OF BEVERLY HILLS STD. PLAN BH 107.
6. CROSS AND LONGITUDINAL GUTTERS PER SPPWC STD. PLAN 122-2.
8. ASPHALT CONCRETE (B-PG 70-10 HMA) PAVEMENT (t=6"). (2)
9. CRUSHED MISCELLANEOUS BASE (DEPTH PER TYPICAL SECTIONS).
13. MANHOLE, METER, OR VALVE TO GRADE.
15. 4" CURB DRAIN IN 8" CURB PER BEVERLY HILLS STD. PLAN BH 109.
18. 2" THICK ASPHALT CONCRETE (FINISH OVERLAY) PAVEMENT (C2-PG-70-10 HMA). (2)
19. ELECTRICAL VAULT, ELECTRICAL CABINET, AND TSPB PER TRAFFIC SIGNAL AND STREET LIGHTING PLANS.
24. CATCH BASIN PER STORM DRAIN IMPROVEMENT PLANS.
31. FENCE
27. CONCRETE CURB PER SPPWC STD PLAN 120-2, TYPE A1-6.
35. VEGETATED BIOSWALE (SEE SHEET 05 FOR DETAIL AND LIMITS)
40. EXISTING PAVEMENT (AC, BASE, PCC, AND SUBBASE) DEPTH PER TYPICAL SECTION.

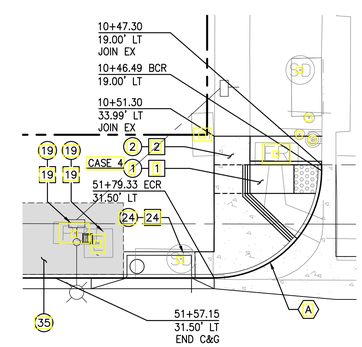
LEGEND

- PCC
- BIOSWALE
- FLOWLINE
- SAWCUT

LINE / CURVE TABLE

#	DELTA/BRG	RADIUS	LENGTH	TANGENT
A	89°58'38"	15.00'	23.56'	14.99'
B	90°01'22"	15.00'	23.57'	15.01'
C	89°59'12"	15.00'	23.56'	15.00'
D	90°00'48"	15.00'	23.57'	15.00'
E	152°25'10"	2.00'	5.32'	8.15'
F	N 39°16'00" W	-	301.34'	-
G	N 39°16'02" W	-	213.84'	-
H	N 39°16'35" W	-	301.48'	-
I	N 50°42'38" E	-	7046.27'	-
J	N 50°42'38" E	-	3763.24'	-





N SANTA MONICA BLVD AND ALPINE DR
NORTHWEST CURB RAMP
1"=10'

NOTES:

1. LOCATION OF EXISTING UTILITIES ARE APPROXIMATE AND DEPTH ARE UNKNOWN. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO THE START OF EXCAVATION. CONTRACTOR SHALL TAKE CARE DURING EXCAVATION AND PROTECT IN PLACE ALL UTILITIES ENCOUNTERED. DAMAGED UTILITY FACILITIES SHALL BE REPAIRED AT NO ADDITIONAL COST.
2. CONST CL DOES NOT REPRESENT THE RECORDED ROAD CL ON NORTH SANTA MONICA BLVD. SEE TYPICAL SECTIONS FOR CENTERLINE ADJUSTMENTS.
3. SEE SHEETS 27 TO 46 FOR STORM DRAIN AND CATCH BASIN IMPROVEMENTS.
4. FOR ALL SIGNAL AND STREET LIGHTING EQUIPMENT REMOVALS, ADJUSTMENTS, AND PLACEMENT SEE TRAFFIC SIGNAL AND LIGHTING PLANS. (SHEETS 47 TO 61)
5. CONTRACTOR SHALL BACKFILL AND PLACE SOD IN TURF AREAS DAMAGED BY THE CONSTRUCTION.
6. LANDSCAPE ARCHITECT/ CITY ARBORIST SHALL "TAG" THE SPECIFIC TREES TO BE REMOVED PRIOR TO BIDDING. SEE LANDSCAPING PLANS AND SPECIAL PROVISIONS.

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

Underground Service Alert
Call: TOLL FREE
811
TWO WORKING DAYS BEFORE YOU DIG

WARNING:
BEFORE STARTING WORK ON EXISTING SERIES STREET LIGHTING CIRCUITS, CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM THE SERVING UTILITY. CUT-OUT PLUGS MUST BE PULLED AND "MEN AT WORK" SIGNS POSTED BEFORE ANY WORK IS DONE OR CONNECTIONS MADE.

PSOMAS
555 South Flower Street, Suite 4300
Los Angeles, CA 90071
(213) 223-1400 (213) 223-1444 (FAX)
CHARLES R. HEFFERNAN PE 40759 DATE 04/ 08/ 2016

REGISTERED PROFESSIONAL ENGINEER CHARLES R. HEFFERNAN NO. 40759 EXP. 03/31/17 CIVIL STATE OF CALIFORNIA

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

CIVIL IMPROVEMENTS

STA 51+00.00 TO STA 59+00.00
WILSHIRE BOULEVARD TO DOHENY DRIVE

SCALE AS SHOWN

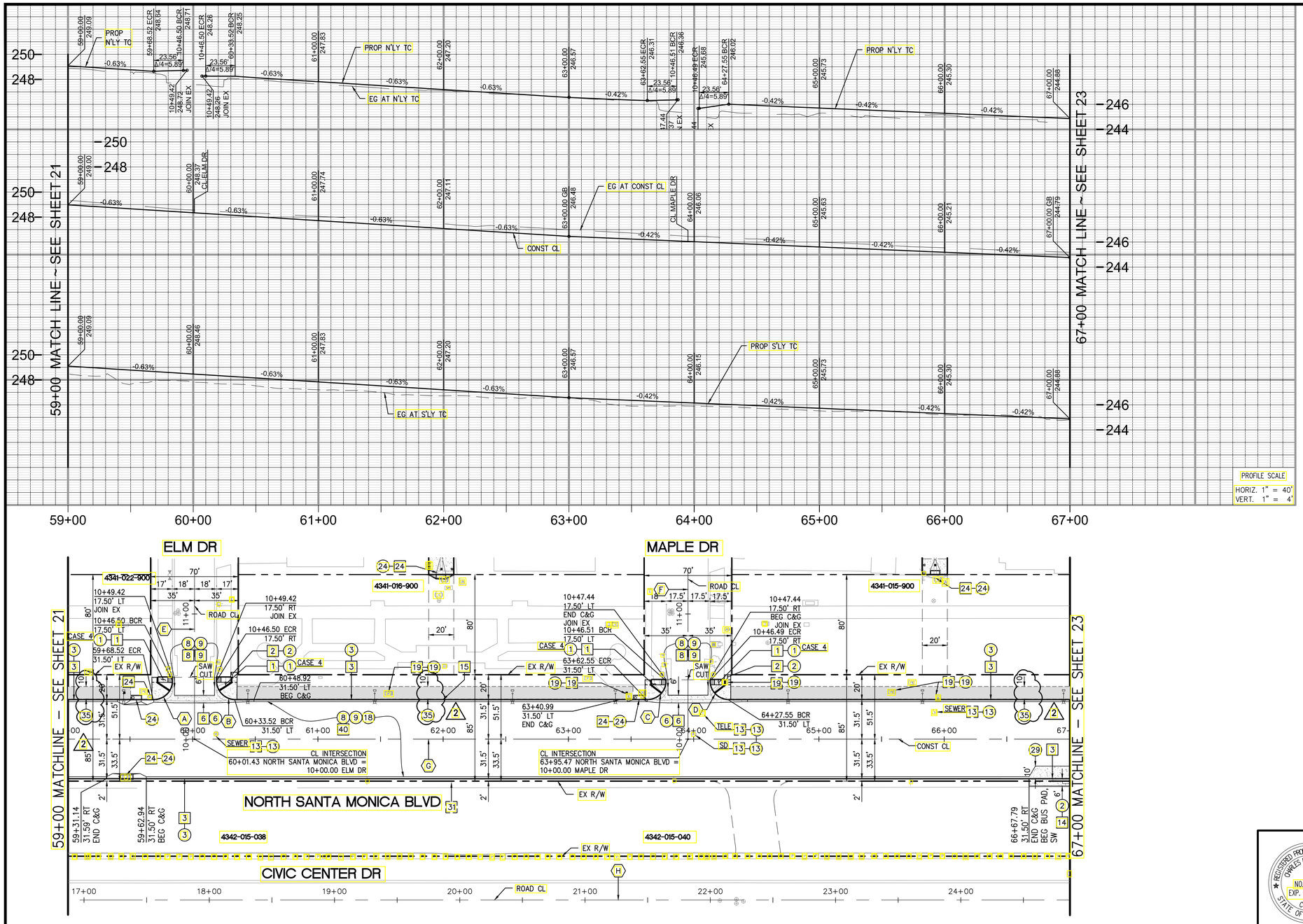
F.B. NO.	PAGE	TO	
DESIGNED	VH	DATE 12/ 14/ 2015	
DRAWN	HC	DATE 12/ 14/ 2015	
CHECKED	CM	DATE 2/ 16/ 2016	
06/02/16	2 ADDENDUM NO. 2		VH
DATE	REVISION		BY

SUBMITTED ____ DATE ____
APPROVED ____ DATE 04/ 08/ 2016

JOB NO. 2184
DRAWING NO. 7449
SHEET 21 OF 85 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT

DWG Name: W:\YBEV041000\Public_Works\Sheets\WD-06.DWG Plotted by: vincent.hellens on May 23, 2016 – 21:32:06



CONSTRUCTION NOTES:

- CONSTRUCT
- EXISTING (PROTECT IN PLACE)
- REMOVE
- REMODEL EXISTING
- REMOVE & RECONSTRUCT
- WORK BY OTHERS

1. CURB RAMP PER CITY OF BEVERLY HILLS STD. PLAN BH 103 (CASE PER PLAN).
2. 4" PCC SIDEWALK PER CITY OF BEVERLY HILLS STD. PLAN BH 105 AND BH 104. SAWCUT AND JOIN SIDEWALK AT NEAREST JOINT.
3. NON-RESIDENTIAL INTEGRAL CURB AND GUTTER PER CITY OF BEVERLY HILLS STD. PLAN BH 107.
6. ~~CROSS AND LONGITUDINAL GUTTERS PER SPPWC STD. PLAN 122-2.~~
8. ASHPALT CONCRETE (B-PG 70-10 HMA) PAVEMENT (t=6"). 2
9. ~~CRUSHED MISCELLANEOUS BASE (DEPTH PER TYPICAL SECTIONS).~~
13. MANHOLE, METER, OR VALVE TO GRADE.
14. UNCLASSIFIED EXCAVATION.
15. ~~4" CURB DRAIN IN 8" CURB PER BEVERLY HILLS STD. PLAN BH 109.~~
18. 2" THICK ASPHALT CONCRETE (FINISH OVERLAY) PAVEMENT (C2-PG-70-10 HMA). 2
19. ELECTRICAL VAULT, ELECTRICAL CABINET, AND TSPB PER TRAFFIC SIGNAL AND STREET LIGHTING PLANS.
24. CATCH BASIN PER STORM DRAIN IMPROVEMENT PLANS.
29. CONCRETE BUS PAD PER SPPWC STD. PLAN 131-2.
31. FENCE
35. VEGETATED BIOSWALE (SEE SHEET 05 FOR DETAIL AND LIMITS)
40. EXISTING PAVEMENT (AC, BASE, PCC, AND SUBBASE) DEPTH PER TYPICAL SECTION.

LEGEND

- PCC
- SAWCUT
- BIOSWALE

LINE / CURVE TABLE

#	DELTA/BRG	RADIUS	LENGTH	TANGENT
A	90°00'14"	15.00'	23.56'	15.00'
B	89°59'46"	15.00'	23.56'	15.00'
C	90°00'57"	15.00'	23.57'	15.00'
D	89°59'30"	15.00'	23.56'	15.00'
E	N 39°17'36" W	-	301.35'	-
F	N 39°18'19" W	-	301.35'	-
G	N 50°42'38" E	-	7046.27'	-
H	N 50°42'38" E	-	3763.24'	-

NOTES:

1. LOCATION OF EXISTING UTILITIES ARE APPROXIMATE AND DEPTH ARE UNKNOWN. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO THE START OF EXCAVATION. CONTRACTOR SHALL TAKE CARE DURING EXCAVATION AND PROTECT IN PLACE ALL UTILITIES ENCOUNTERED. DAMAGED UTILITY FACILITIES SHALL BE REPAIRED AT NO ADDITIONAL COST.
2. CONST CL DOES NOT REPRESENT THE RECORDED ROAD CL ON NORTH SANTA MONICA BLVD. SEE TYPICAL SECTIONS FOR CENTERLINE ADJUSTMENTS.
3. SEE SHEETS 27 TO 46 FOR STORM DRAIN AND CATCH BASIN IMPROVEMENTS.
4. FOR ALL SIGNAL AND STREET LIGHTING EQUIPMENT REMOVALS, ADJUSTMENTS, AND PLACEMENT SEE TRAFFIC SIGNAL AND LIGHTING PLANS. (SHEETS 47 TO 61)
5. CONTRACTOR SHALL BACKFILL AND PLACE SOD IN TURF AREAS DAMAGED BY THE CONSTRUCTION.
6. LANDSCAPE ARCHITECT/ CITY ARBORIST SHALL "TAG" THE SPECIFIC TREES TO BE REMOVED PRIOR TO BIDDING. SEE LANDSCAPING PLANS AND SPECIAL PROVISIONS.

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

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TWO WORKING DAYS BEFORE YOU DIG

WARNING:
BEFORE STARTING WORK ON EXISTING SERIES STREET LIGHTING CIRCUITS, CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM THE SERVING UTILITY. CUT-OUT PLUGS MUST BE PULLED AND "MEN AT WORK" SIGNS POSTED BEFORE ANY WORK IS DONE OR CONNECTIONS MADE.

40' 20' 0' 40' 80'
SCALE IN FEET
SCALE: 1" = 40'

PSOMAS
555 South Flower Street, Suite 4300
Los Angeles, CA 90071
(213) 223-1400 (213) 223-1444 (FAX)
CHARLES R. HEFFERNAN PE 40759 04/ 08/ 2016 DATE

REGISTERED PROFESSIONAL ENGINEER CHARLES R. HEFFERNAN NO. 40759 EXP. 03/31/17 CIVIL STATE OF CALIFORNIA

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

CIVIL IMPROVEMENTS

STA 59+00.00 TO STA 67+00.00
WILSHIRE BOULEVARD TO DOHENY DRIVE

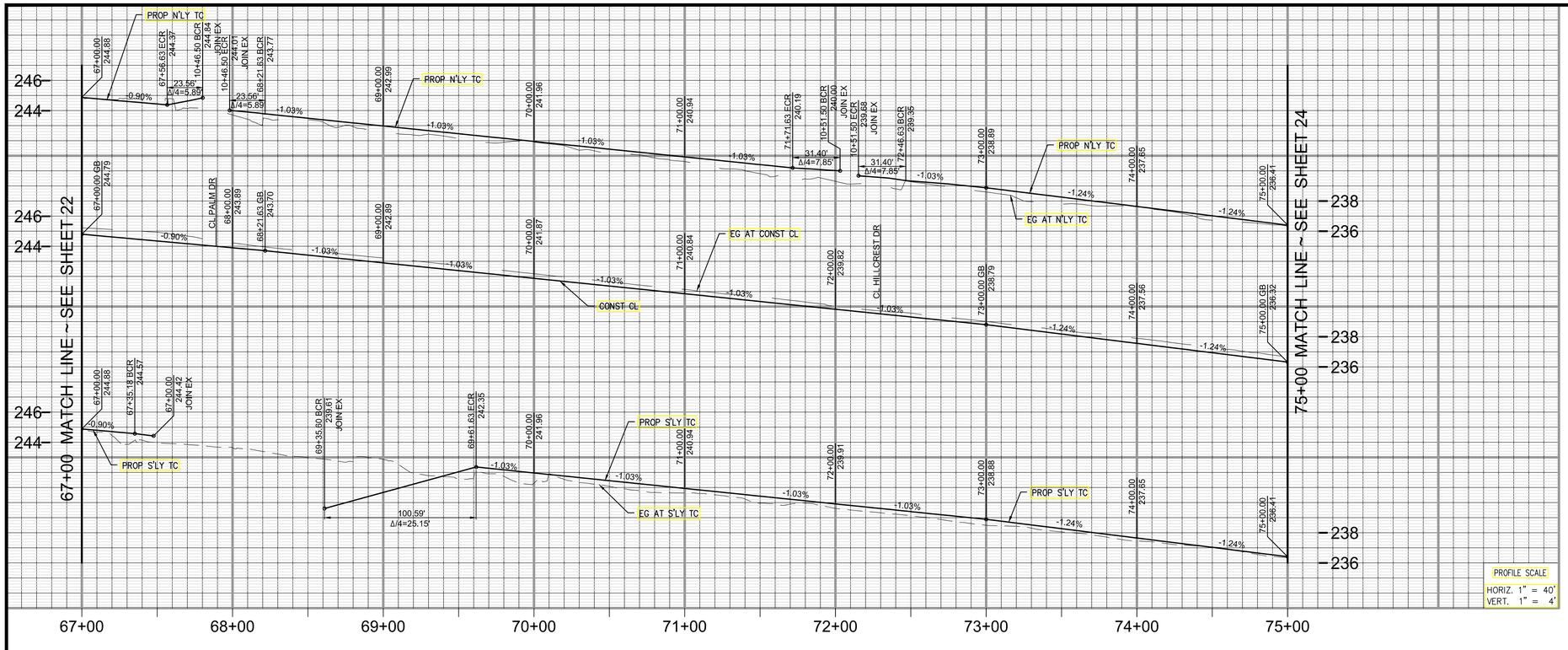
SCALE AS SHOWN			
F.B. NO.	PAGE	TO	
DESIGNED	VH	DATE 12/ 14/ 2015	
DRAWN	HC	DATE 12/ 14/ 2015	
CHECKED	CM	DATE 2/ 16/ 2016	
06/02/16	2 ADDENDUM NO. 2		VH
DATE	REVISION		BY

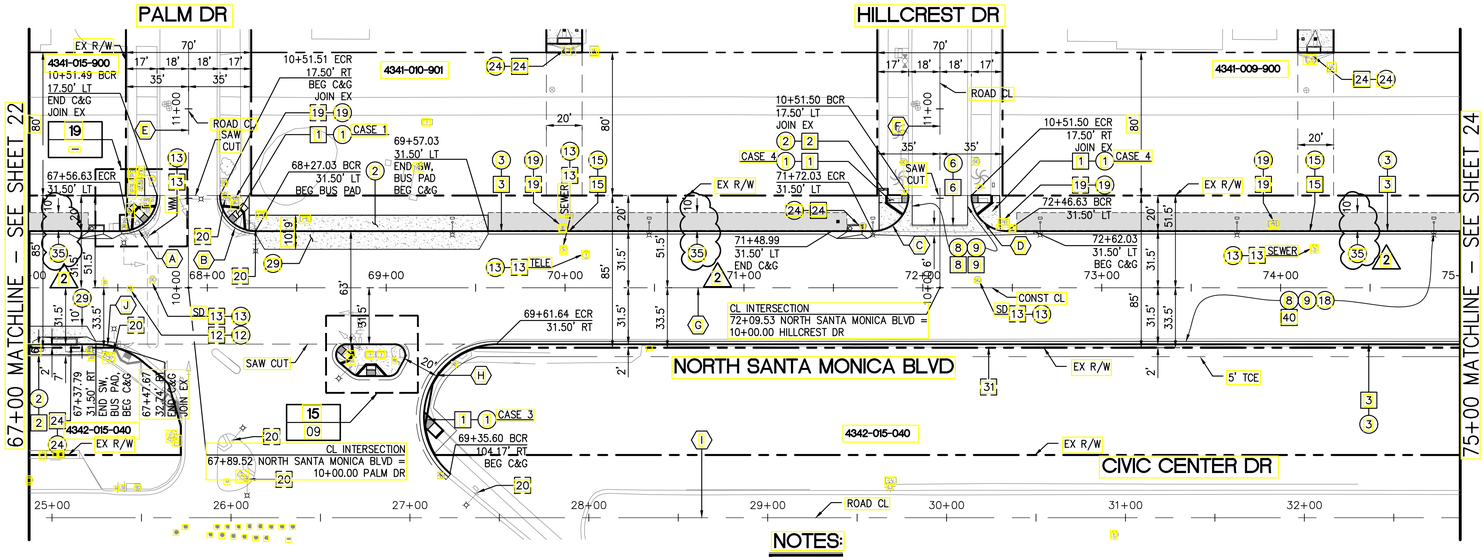
SUBMITTED DATE
APPROVED DATE 04/ 08/ 2016

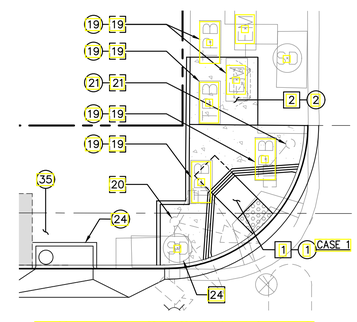
JOB NO. 2184
DRAWING NO. 7449
SHEET 22 OF 85 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT

DWG Name: W:\1BEV041000\Public_Works\Sheets\RD-07.DWG Plotted by: vincent.hellens on May 23, 2016 - 21:22:42







N SANTA MONICA BLVD AND PALM DR

NORTHWEST CURB RAMP

1"=10'

CONSTRUCTION NOTES:

- CONSTRUCT
- EXISTING (PROTECT IN PLACE)
- REMOVE
- REMODEL EXISTING
- REMOVE & RECONSTRUCT
- WORK BY OTHERS

1. CURB RAMP PER CITY OF BEVERLY HILLS STD. PLAN BH 103 (CASE PER PLAN).
2. 4" PCC SIDEWALK PER CITY OF BEVERLY HILLS STD. PLAN BH 105 AND BH 104. SAWCUT AND JOIN SIDEWALK AT NEAREST JOINT.
3. NON-RESIDENTIAL INTEGRAL CURB AND GUTTER PER CITY OF BEVERLY HILLS STD. PLAN BH 107.
5. LONGITUDINAL ALLEY GUTTER PER CITY OF BEVERLY HILLS STD. PLAN BH 111.
6. CROSS AND LONGITUDINAL GUTTERS PER SPPWC STD. PLAN 122-2.
8. ASPHALT CONCRETE (B-PG 70-10 HMA) PAVEMENT (t=6"). (2)
9. CRUSHED MISCELLANEOUS BASE (DEPTH PER TYPICAL SECTIONS).
12. SURVEY MONUMENTS ADJUST TO FINISH SURFACE PER BEVERLY HILLS STD. PLAN BH 605.
13. MANHOLE, METER, OR VALVE TO GRADE.
18. 2" THICK ASPHALT CONCRETE (FINISH OVERLAY) PAVEMENT (C2-PG-70-10 HMA). (2)
19. ELECTRICAL VAULT, ELECTRICAL CABINET, AND TSPB PER TRAFFIC SIGNAL AND STREET LIGHTING PLANS.
20. TRAFFIC SIGNAL POLES/ LIGHT POLES PER TRAFFIC SIGNAL AND LIGHTING PLANS.
24. CATCH BASIN PER STORM DRAIN IMPROVEMENT PLANS.
29. CONCRETE BUS PAD PER SPPWC STD. PLAN 131-2.
31. FENCE
35. VEGETATED BIOSWALE (SEE SHEET 05 FOR DETAIL AND LIMITS)
40. EXISTING PAVEMENT (AC, BASE, PCC, AND SUBBASE) DEPTH PER TYPICAL SECTION.

LEGEND

- PCC
- BIOSWALE
- SAWCUT

LINE / CURVE TABLE

#	DELTA/BRG	RADIUS	LENGTH	TANGENT
A	89°59'29"	15.00'	23.56'	15.00'
B	90°00'31"	15.00'	23.56'	15.00'
C	89°59'48"	20.00'	31.41'	20.00'
D	90°01'12"	20.00'	31.42'	20.00'
E	N 39°16'52" W	–	301.30'	–
F	N 39°17'10" W	–	301.43'	–
G	N 50°42'38" E	–	7046.27'	–
H	140°34'35"	41.00'	100.59'	114.43'
I	N 50°42'38" E	–	3763.24'	–
J	14°00'00"	40.00'	10.01'	5.03'

SCALE IN FEET
SCALE: 1" = 40'

NOTES:

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2. CONST CL DOES NOT REPRESENT THE RECORDED ROAD CL ON NORTH SANTA MONICA BLVD. SEE TYPICAL SECTIONS FOR CENTERLINE ADJUSTMENTS.
3. SEE SHEETS 27 TO 46 FOR STORM DRAIN AND CATCH BASIN IMPROVEMENTS.
4. FOR ALL SIGNAL AND STREET LIGHTING EQUIPMENT REMOVALS, ADJUSTMENTS, AND PLACEMENT SEE TRAFFIC SIGNAL AND LIGHTING PLANS. (SHEETS 47 TO 61)
5. CONTRACTOR SHALL BACKFILL AND PLACE SOD IN TURF AREAS DAMAGED BY THE CONSTRUCTION.
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Underground Service Alert
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811
TWO WORKING DAYS BEFORE YOU DIG

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PSOMAS
555 South Flower Street, Suite 4300
Los Angeles, CA 90071
(213) 223-1400 (213) 223-1444 (FAX)

CHARLES R. HEFFERNAN PE 40759 04/ 08/ 2016 DATE

REGISTERED PROFESSIONAL ENGINEER CHARLES R. HEFFERNAN NO. 40759 EXP. 03/31/17 CIVIL STATE OF CALIFORNIA

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

CIVIL IMPROVEMENTS

STA 67+00.00 TO STA 75+00.00
WILSHIRE BOULEVARD TO DOHENY DRIVE

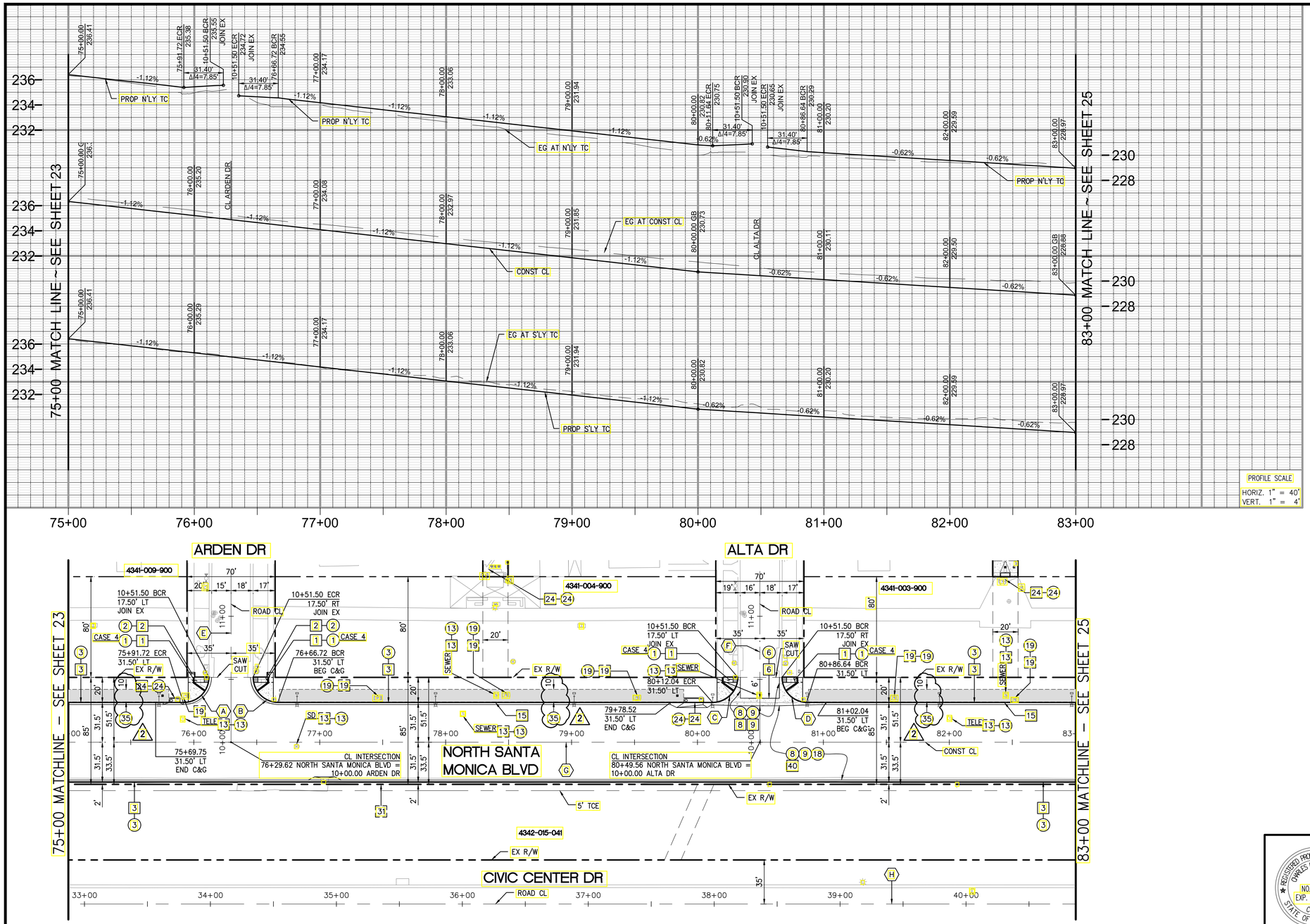
SCALE AS SHOWN			
F.B. NO.	PAGE	TO	
DESIGNED	VH	DATE 12/ 14/ 2015	
DRAWN	HC	DATE 12/ 14/ 2015	
CHECKED	CM	DATE 2/ 16/ 2016	
06/02/16	2	ADDENDUM NO. 2	VH
DATE		REVISION	BY

SUBMITTED DATE
APPROVED DATE 04/ 08/ 2016

JOB NO. 2184
DRAWING NO. 7449
SHEET 23 OF 85 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT

DWG Name: W:\1BEV041000\Public_Works\Sheets\RD-08.DWG Plotted by: vincent.hellens on May 23, 2016 – 21:16:06



CONSTRUCTION NOTES:

- CONSTRUCT
- EXISTING (PROTECT IN PLACE)
- REMOVE
- REMODEL EXISTING
- REMOVE & RECONSTRUCT
- WORK BY OTHERS

1. CURB RAMP PER CITY OF BEVERLY HILLS STD. PLAN BH 103 (CASE PER PLAN).
2. 4" PCC SIDEWALK PER CITY OF BEVERLY HILLS STD. PLAN BH 105 AND BH 104. SAWCUT AND JOIN SIDEWALK AT NEAREST JOINT.
3. NON-RESIDENTIAL INTEGRAL CURB AND GUTTER PER CITY OF BEVERLY HILLS STD. PLAN BH 107.
6. CROSS AND LONGITUDINAL GUTTERS PER SPPWC STD. PLAN 122-2.
8. ASPHALT CONCRETE (B-PG 70-10 HMA) PAVEMENT (t=6"). 2
9. CRUSHED MISCELLANEOUS BASE (DEPTH PER TYPICAL SECTIONS).
13. MANHOLE, METER, OR VALVE TO GRADE.
15. 4" CURB DRAIN IN 8" CURB PER BEVERLY HILLS STD. PLAN BH 109.
18. 2" THICK ASPHALT CONCRETE (FINISH OVERLAY) PAVEMENT (C2-PG-70-10 HMA). 2
19. ELECTRICAL VAULT, ELECTRICAL CABINET, AND TSPB PER TRAFFIC SIGNAL AND STREET LIGHTING PLANS.
24. CATCH BASIN PER STORM DRAIN IMPROVEMENT PLANS.
31. FENCE
35. VEGETATED BIOSWALE (SEE SHEET 05 FOR DETAIL AND LIMITS)
40. EXISTING PAVEMENT (AC, BASE, PCC, AND SUBBASE) DEPTH PER TYPICAL SECTION.

LEGEND

- PCC
- SAWCUT
- BIOSWALE

LINE / CURVE TABLE

#	DELTA/BRG	RADIUS	LENGTH	TANGENT
A	90°00'09"	20.00'	31.42'	20.00'
B	89°59'51"	20.00'	31.42'	20.00'
C	90°00'15"	20.00'	31.42'	20.00'
D	89°59'45"	20.00'	31.41'	20.00'
E	N 39°17'32" W	-	301.54'	-
F	N 39°17'37" W	-	301.59'	-
G	N 50°42'38" E	-	7046.27'	-
H	N 50°42'38" E	-	3763.24'	-

NOTES:

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3. SEE SHEETS 27 TO 46 FOR STORM DRAIN AND CATCH BASIN IMPROVEMENTS.
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TWO WORKING DAYS BEFORE YOU DIG

WARNING:
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40' 20' 0' 40' 80'
SCALE IN FEET
SCALE: 1" = 40'

PSOMAS
555 South Flower Street, Suite 4300
Los Angeles, CA 90071
(213) 223-1400 (213) 223-1444 (FAX)
CHARLES R. HEFFERNAN PE 40759 04/ 08/ 2016 DATE

REGISTERED PROFESSIONAL ENGINEER CHARLES R. HEFFERNAN NO. 40759 EXP. 03/31/17 CIVIL STATE OF CALIFORNIA

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

CIVIL IMPROVEMENTS

STA 75+00.00 TO STA 83+00.00
WILSHIRE BOULEVARD TO DOHENY DRIVE

SCALE AS SHOWN			
F.B. NO.	PAGE	TO	
DESIGNED	VH	DATE 12/ 14/ 2015	
DRAWN	HC	DATE 12/ 14/ 2015	
CHECKED	CM	DATE 2/ 16/ 2016	
06/02/16	2 ADDENDUM NO. 2		VH
DATE	REVISION		BY

SUBMITTED DATE
APPROVED DATE 04/ 08/ 2016

JOB NO. 2184
DRAWING NO. 7449
SHEET 24 OF 85 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT

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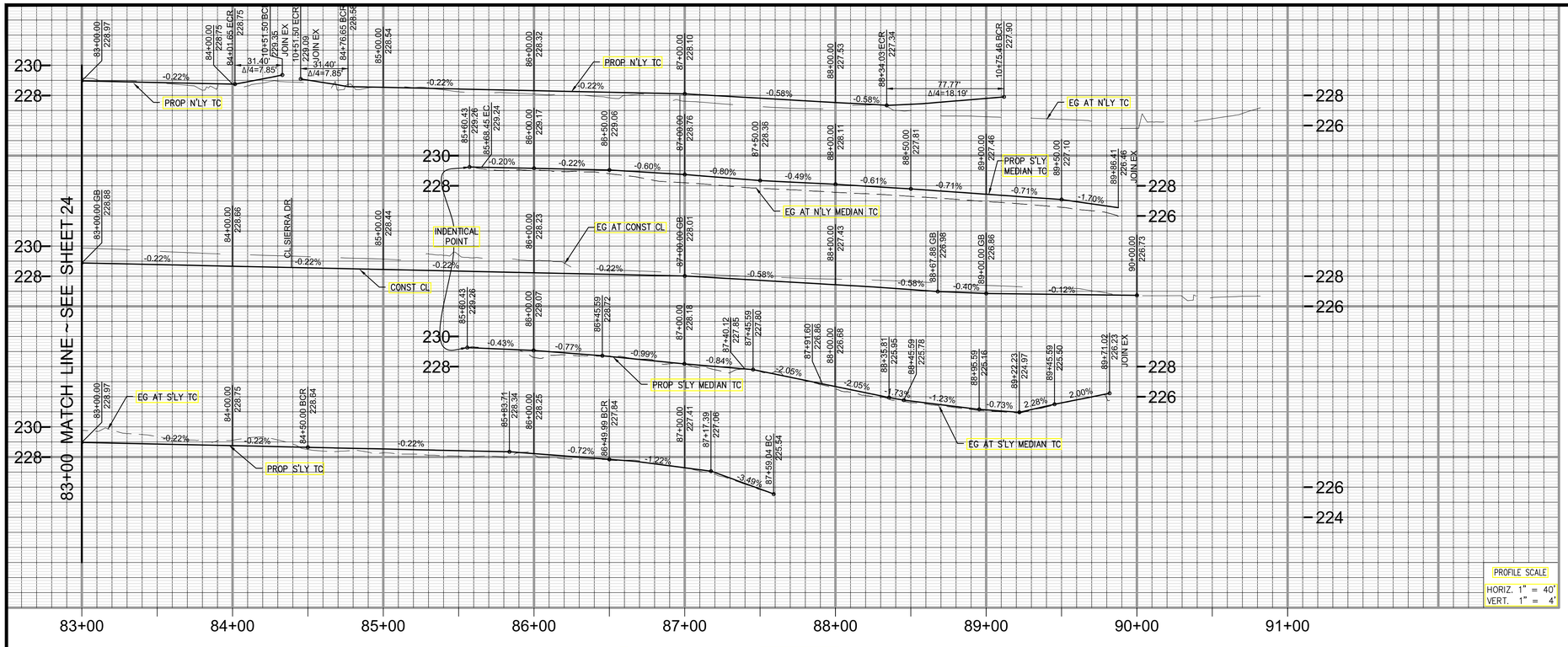

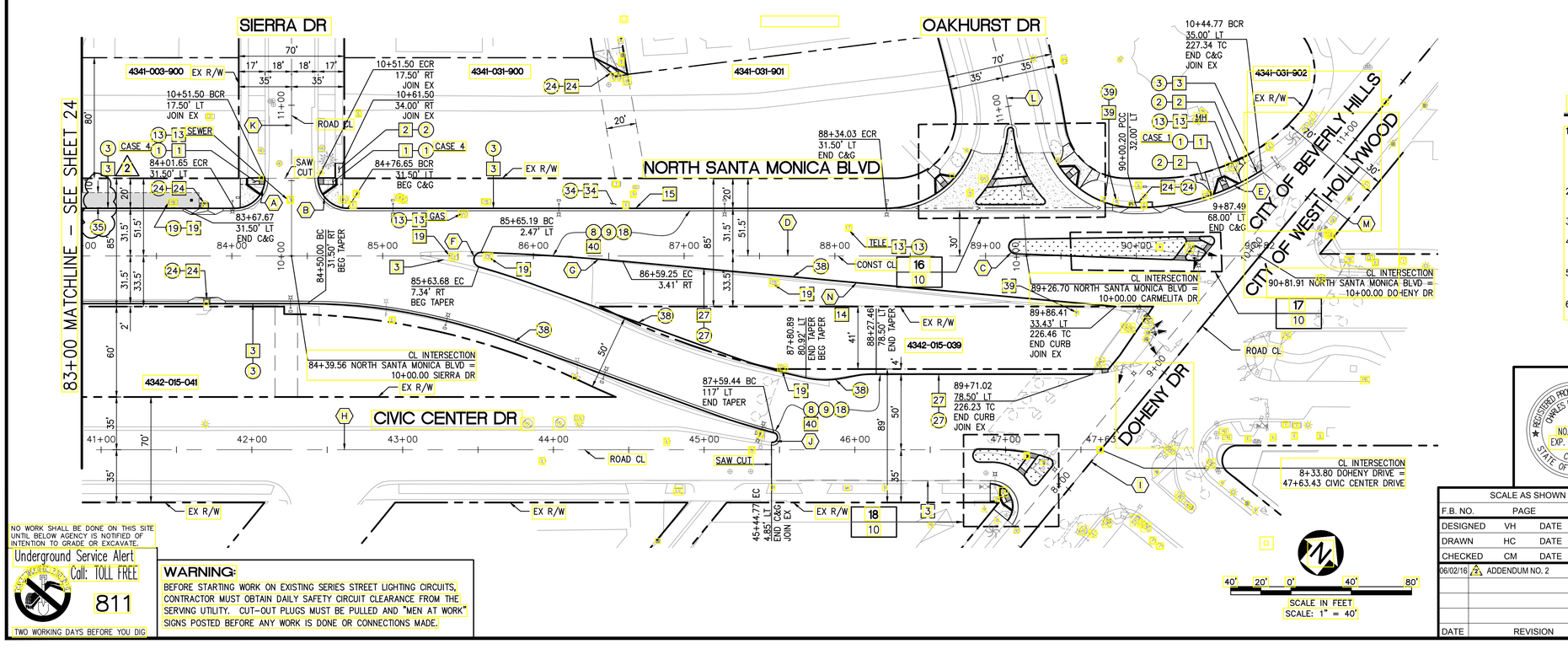

CONSTRUCTION NOTES:

- CONSTRUCT
- REMODEL EXISTING
- EXISTING (PROTECT IN PLACE)
- REMOVE & RECONSTRUCT
- REMOVE
- WORK BY OTHERS

1. CURB RAMP PER CITY OF BEVERLY HILLS STD. PLAN BH 103 (CASE PER PLAN).
2. 4" PCC SIDEWALK PER CITY OF BEVERLY HILLS STD. PLAN BH 105 AND BH 104. SAWCUT AND JOIN SIDEWALK AT NEAREST JOINT.
3. NON-RESIDENTIAL INTEGRAL CURB AND GUTTER PER CITY OF BEVERLY HILLS STD. PLAN BH 107.
8. ASPHALT CONCRETE (B-PG 70-10 HMA) PAVEMENT (t=6").
9. CRUSHED MISCELLANEOUS BASE (DEPTH PER TYPICAL SECTIONS).
13. MANHOLE, METER, OR VALVE TO GRADE.
15. 4" CURB DRAIN IN 8" CURB PER BEVERLY HILLS STD. PLAN BH 109.
18. 2" THICK ASPHALT CONCRETE (FINISH OVERLAY) PAVEMENT (C2-PG-70-10 HMA).
19. ELECTRICAL VAULT, ELECTRICAL CABINET, AND TSPB PER TRAFFIC SIGNAL AND STREET LIGHTING PLANS.
24. CATCH BASIN PER STORM DRAIN IMPROVEMENT PLANS.
26. LANDSCAPING PER LANDSCAPE PLANS.
27. CONCRETE CURB PER SPPWC STD PLAN 120-2, TYPE A1-6.
34. EXISTING IRRIGATION SPRINKLER SYSTEM
35. VEGETATED BIOSWALE (SEE SHEET 05 FOR DETAIL AND LIMITS)
38. MEDIAN TAPER PER SPPWC STD. PLAN 140-3
39. SIGN PER SIGNING AND STRIPING PLANS
40. EXISTING PAVEMENT (AC, BASE, PCC, AND SUBBASE) DEPTH PER TYPICAL SECTION.

LEGEND

- PCC
- PER LANDSCAPE PLANS
- BIOSWALE
- SAWCUT

LINE / CURVE TABLE

#	DELTA/BRG	RADIUS	LENGTH	TANGENT
A	89°59'58"	20.00'	31.42'	20.00'
B	90°00'02"	20.00'	31.42'	20.00'
C	177°02'47"	5.00'	15.45'	–
D	N 50°42'38" E	–	7046.27'	–
E	33°25'41"	150.00'	87.51'	40.05'
F	166°16'21"	5.00'	14.51'	41.54'
G	03°22'31"	1600.00'	94.26'	47.14'
H	N 50°42'38" E	–	3763.24'	–
I	N 00°04'17" E	–	1183.90'	–
J	175°45'21"	3.40'	10.43'	91.76'
K	N 39°17'20" W	–	291.57'	–
L	39°42'44"	700.00'	485.18'	252.79'
M	N 00°03'51" E	–	1321.41'	–
N	N 55°57'34" E	–	328.13'	–

NOTES:

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3. SEE SHEETS 27 TO 46 FOR STORM DRAIN AND CATCH BASIN IMPROVEMENTS.
4. FOR ALL SIGNAL AND STREET LIGHTING EQUIPMENT REMOVALS, ADJUSTMENTS, AND PLACEMENT SEE TRAFFIC SIGNAL AND LIGHTING PLANS. (SHEETS 47 TO 61)
5. CONTRACTOR SHALL BACKFILL AND PLACE SOD IN TURF AREAS DAMAGED BY THE CONTRACTOR.
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PSOMAS
555 South Flower Street, Suite 4300
Los Angeles, CA 90071
(213) 223-1400 (213) 223-1444 (FAX)
CHARLES R. HEFFERNAN PE 40759 DATE 04/ 08/ 2016

REGISTERED PROFESSIONAL ENGINEER CHARLES R. HEFFERNAN NO. 40759 EXP. 03/31/17 CIVIL STATE OF CALIFORNIA

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

CIVIL IMPROVEMENTS

STA 83+00.00 TO STA 91+00.00
WILSHIRE BOULEVARD TO DOHENY DRIVE

SCALE AS SHOWN			
F.B. NO.	PAGE	TO	
DESIGNED	VH	DATE 12/ 14/ 2015	
DRAWN	HC	DATE 12/ 14/ 2015	
CHECKED	CM	DATE 2/ 16/ 2016	
06/02/16	2	ADDENDUM NO. 2	VH
DATE		REVISION	BY

SUBMITTED ____ DATE ____
APPROVED ____ DATE 04/ 08/ 2016

JOB NO. 2184
DRAWING NO. 7449
SHEET 25 OF 85 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT

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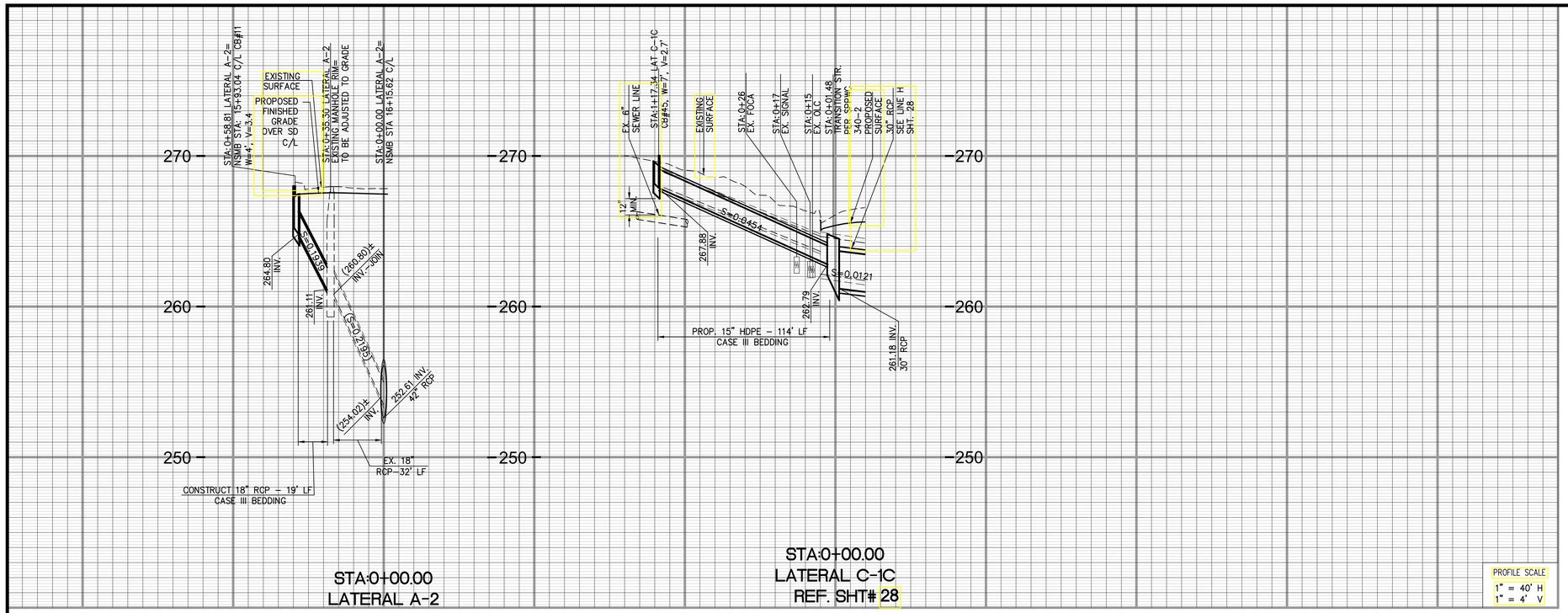
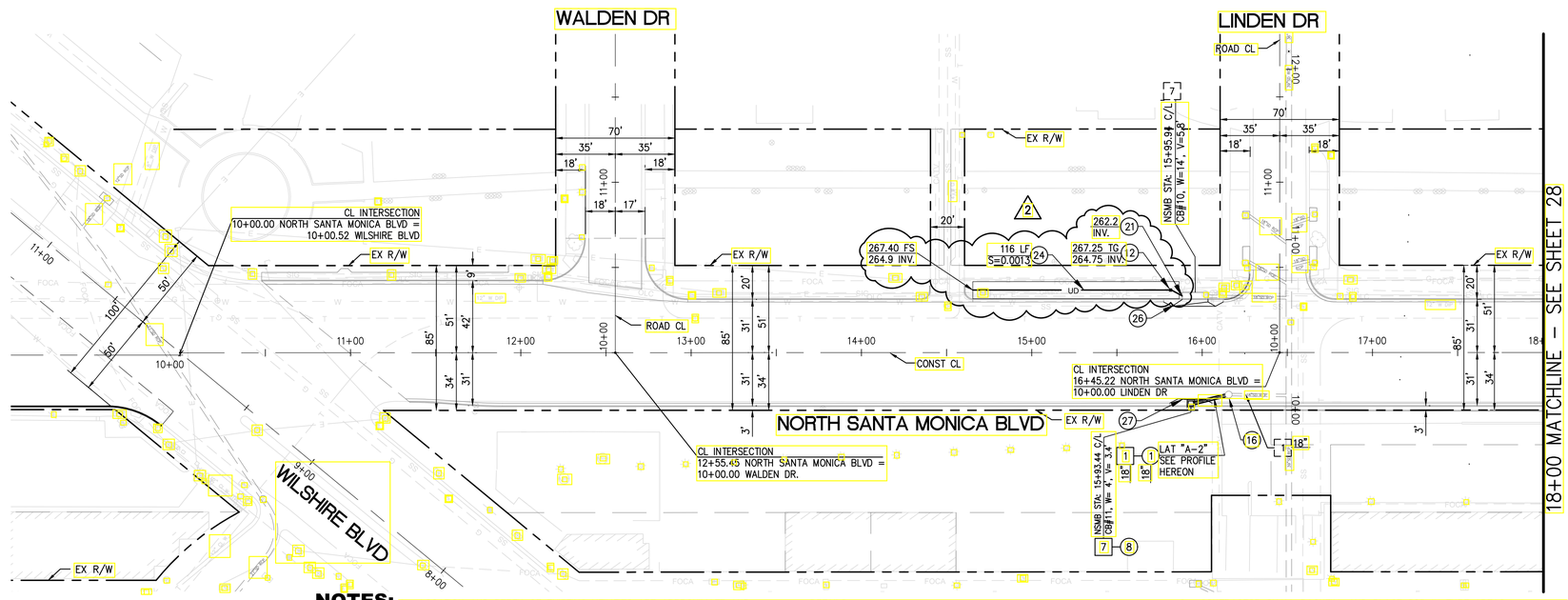


STA:0+00.00
LATERAL A-2

STA:0+00.00
LATERAL C-1C
REF. SHT# 28

PROFILE SCALE
1" = 40' H
1" = 4' V



STORM DRAIN CONSTRUCTION NOTES:

- CONSTRUCT
- REMODEL EXISTING
- EXISTING (PROTECT IN PLACE)
- REMOVE & RECONSTRUCT
- REMOVE
- WORK BY OTHERS
- ## — DETAIL NO.
- ## — SHEET NO.

1. R.C.P. STORM DRAIN, D-LOAD = 2000, SIZE PER PLAN
2. CMP STORM DRAIN, SIZE PER PLAN
3. CIP STORM DRAIN, SIZE PER PLAN
4. NOT USED
5. STORM DRAIN INLET
6. STORM DRAIN PVC FITTING (SDR-35). TYPE PER PLAN, SIZE PER ADJOINING PIPE
7. CURB OPENING CATCH BASIN PER SPPWC STD. PLAN 300-3 (SIZE PER PLAN) WITH CONNECTOR PIPE SCREEN (CPS) AND AUTOMATIC RETRACTABLE SCREEN (ARS) WINGATE BY UNITED STORM WATER, OR APPROVED EQUAL
8. CURB OPENING CATCH BASIN WITH GRATING PER SPPWC STD. PLAN 302-3, FRAME AND GRATING (BICYCLE SAFE) PER CITY OF LA STANDARD PLAN S-342-4 (SIZE PER PLAN) WITH CONNECTOR PIPE SCREEN (CPS) AND AUTOMATIC RETRACTABLE SCREEN (ARS) WINGATE BY UNITED STORM WATER, OR APPROVED EQUAL
9. BROOKS CATCH BASIN NO. 1212 WITH TRAFFIC GRATE
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40' 20' 0' 40' 80'
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REGISTERED PROFESSIONAL ENGINEER CHARLES R. HEFFERNAN NO. 40759 EXP. 03/31/17 CIVIL STATE OF CALIFORNIA

PSOMAS
555 South Flower Street, Suite 4300
Los Angeles, CA 90071
(213) 223-1400 (213) 223-1444 (FAX)
CHARLES R. HEFFERNAN PE 40759 04/ 08/ 2016 DATE

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

STORM DRAIN

WILSHIRE BOULEVARD TO DOHENY DRIVE

SCALE AS SHOWN

F.B. NO.	PAGE	TO	
DESIGNED	MM	DATE	02/ 03/ 2016
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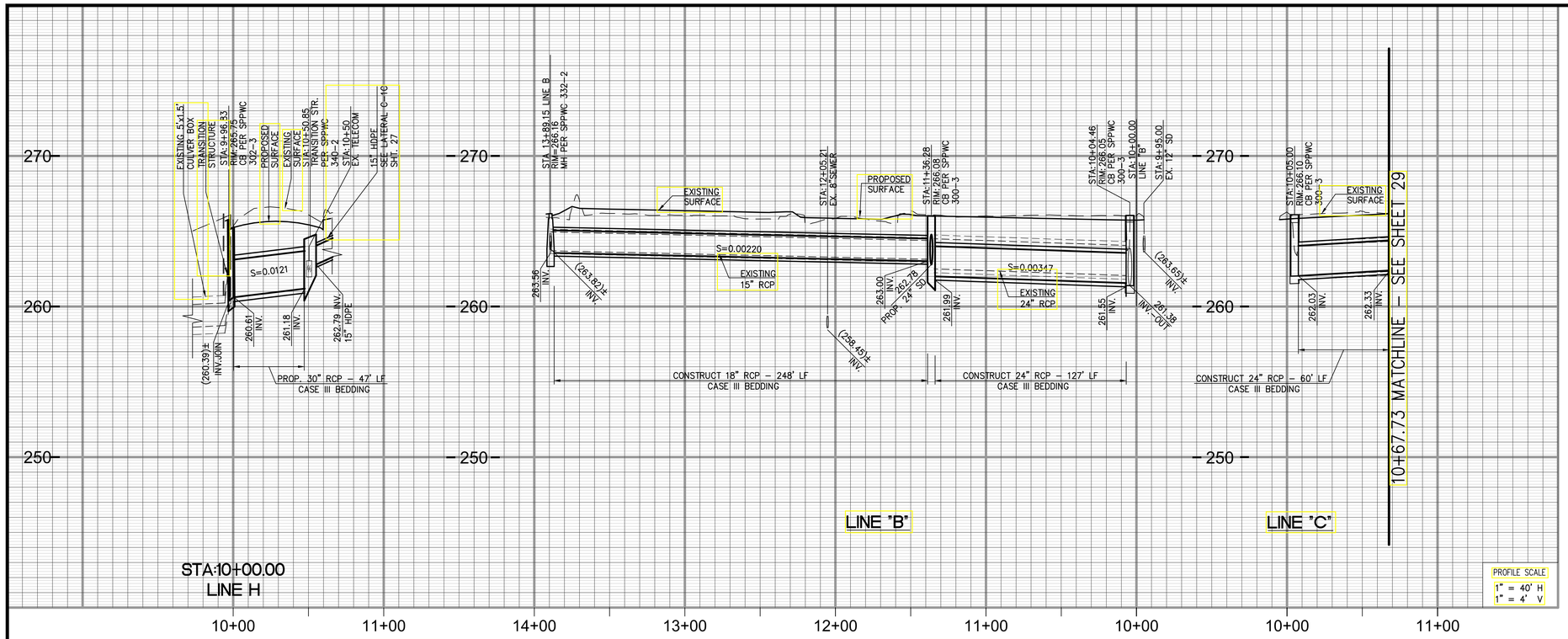
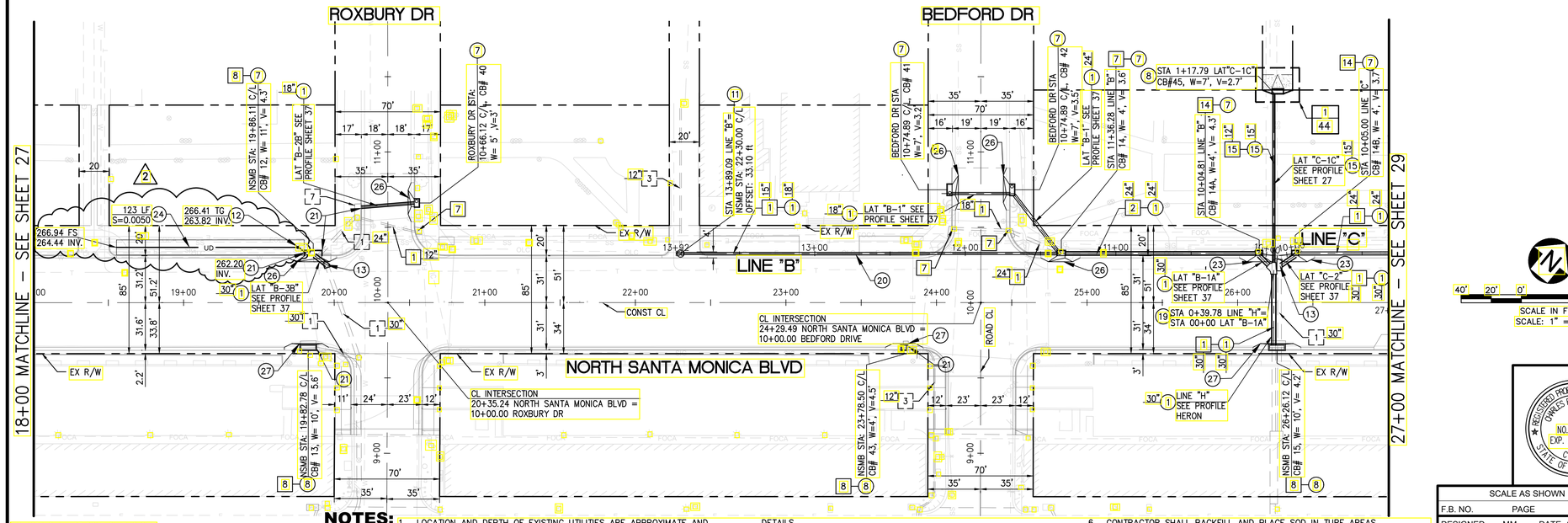
JOB NO. 2184
DRAWING NO. 7449
SHEET 27 OF 85 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT





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JOB NO. 2184
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SHEET 28 OF 85 SHEET

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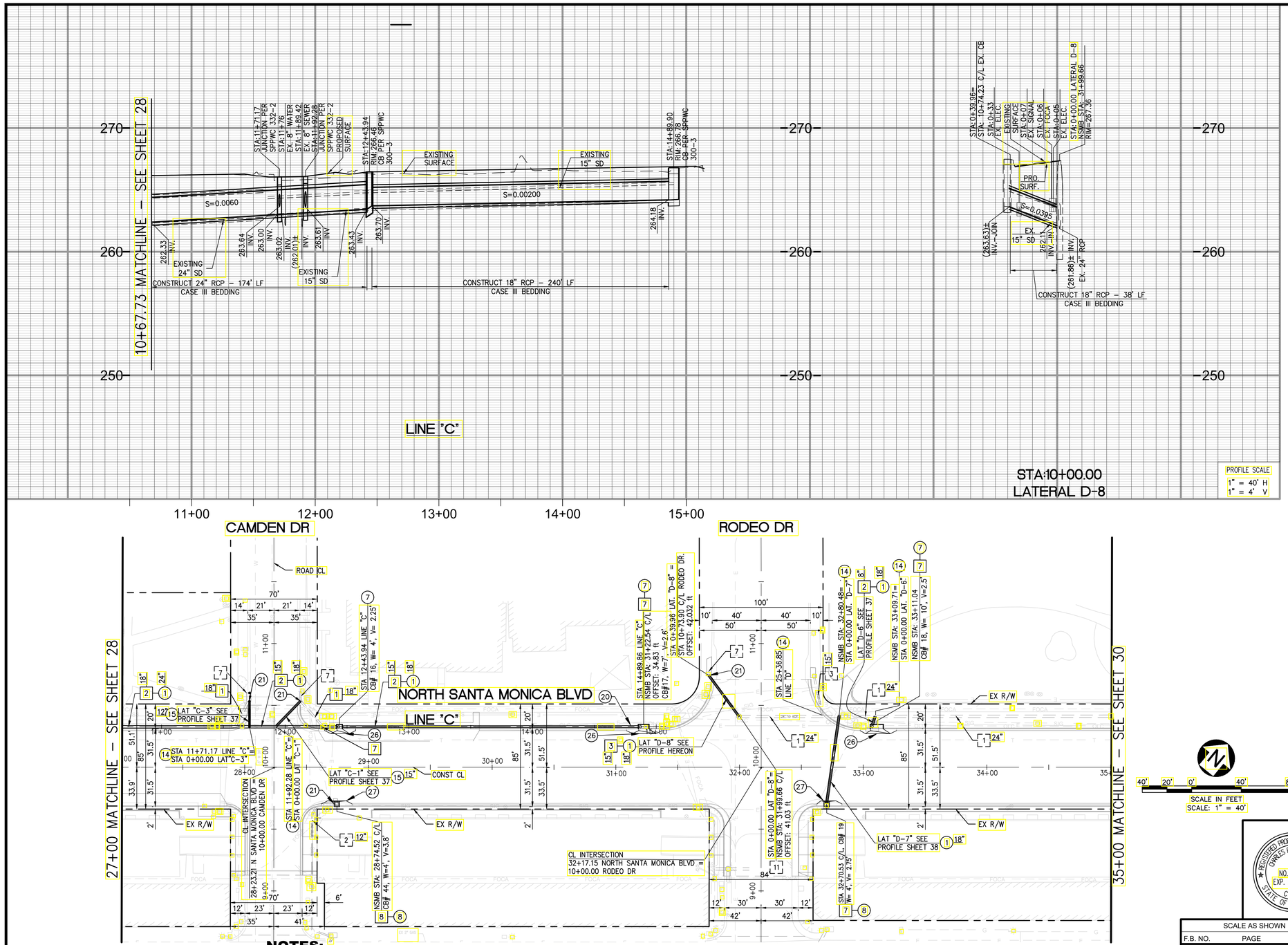

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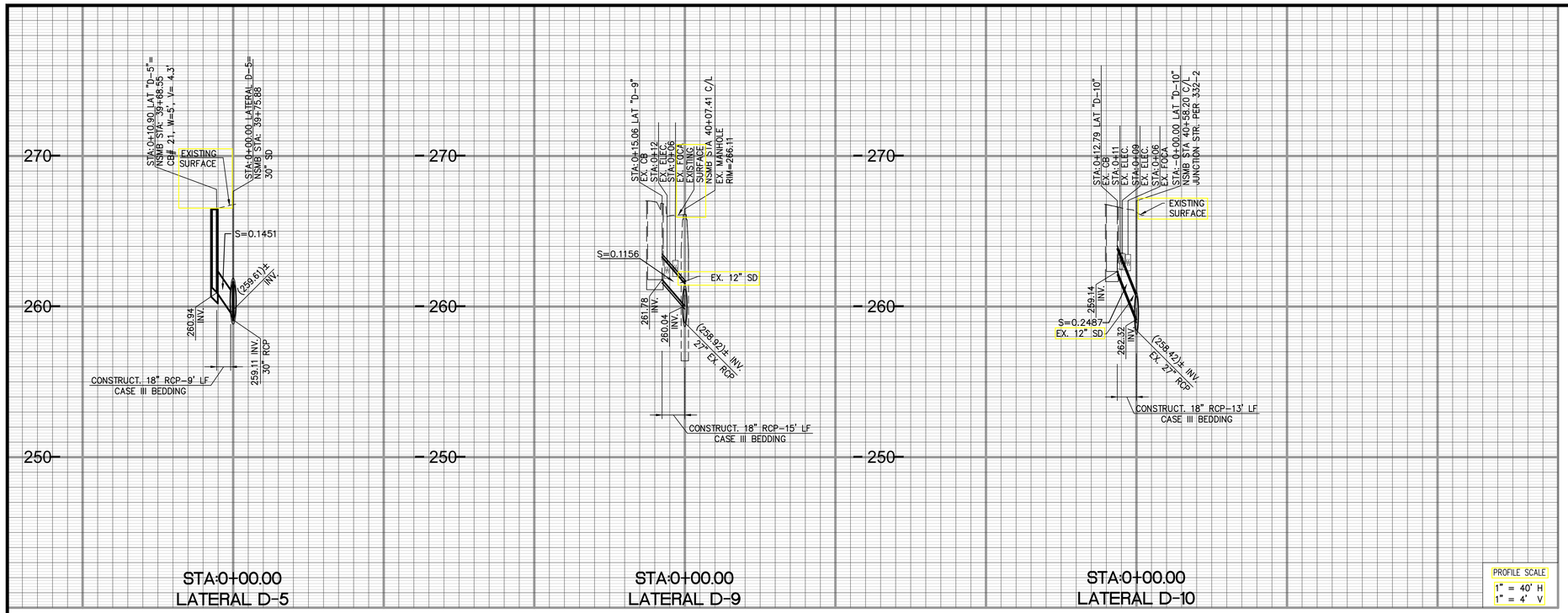

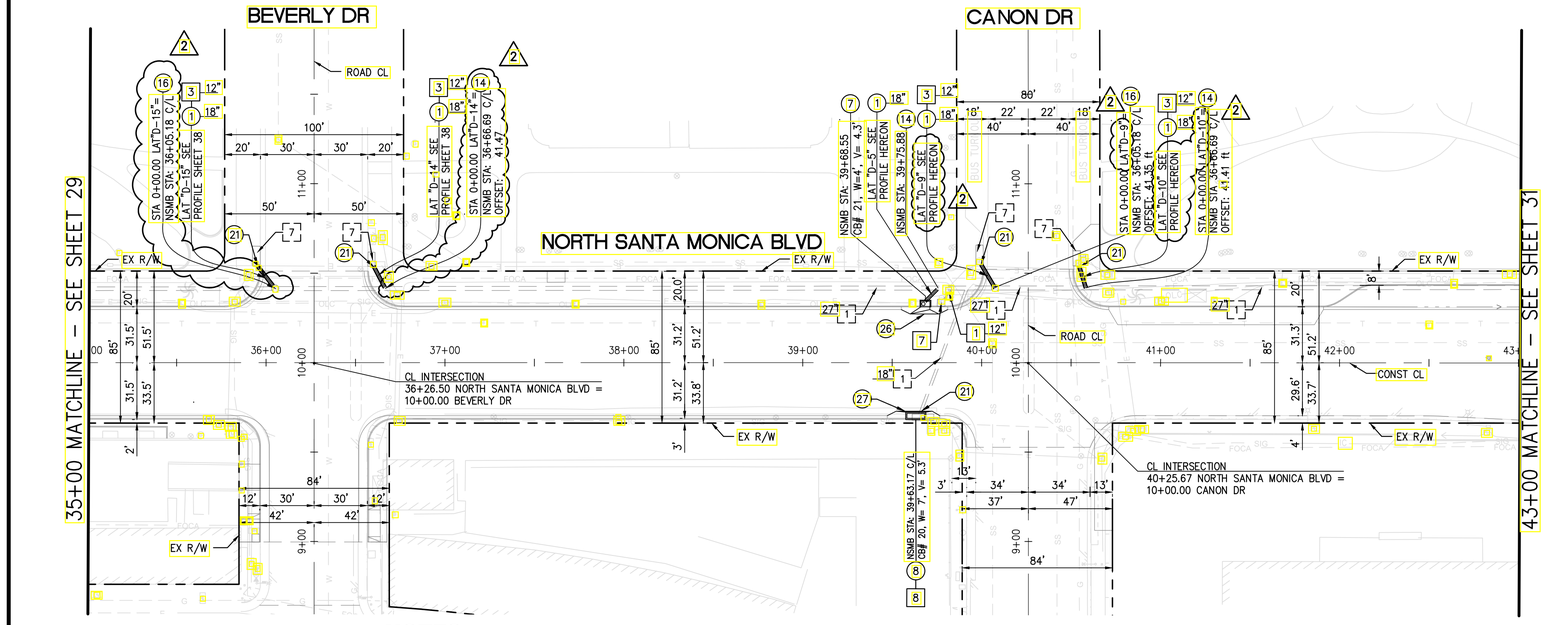

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REGISTERED PROFESSIONAL ENGINEER
CHARLES R. HEFFERNAN
NO. 40759
EXP. 03/31/17
CIVIL
STATE OF CALIFORNIA

PSOMAS
555 South Flower Street, Suite 4300
Los Angeles, CA 90071
(213) 223-1400 (213) 223-1444 (FAX)
CHARLES R. HEFFERNAN PE 40759 04/ 08/ 2016 DATE

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

STORM DRAIN

WILSHIRE BOULEVARD TO DOHENY DRIVE

SCALE AS SHOWN

F.B. NO.	PAGE	TO	
DESIGNED	MM	DATE	02/ 03/ 2016
DRAWN	SA	DATE	02/ 03/ 2016
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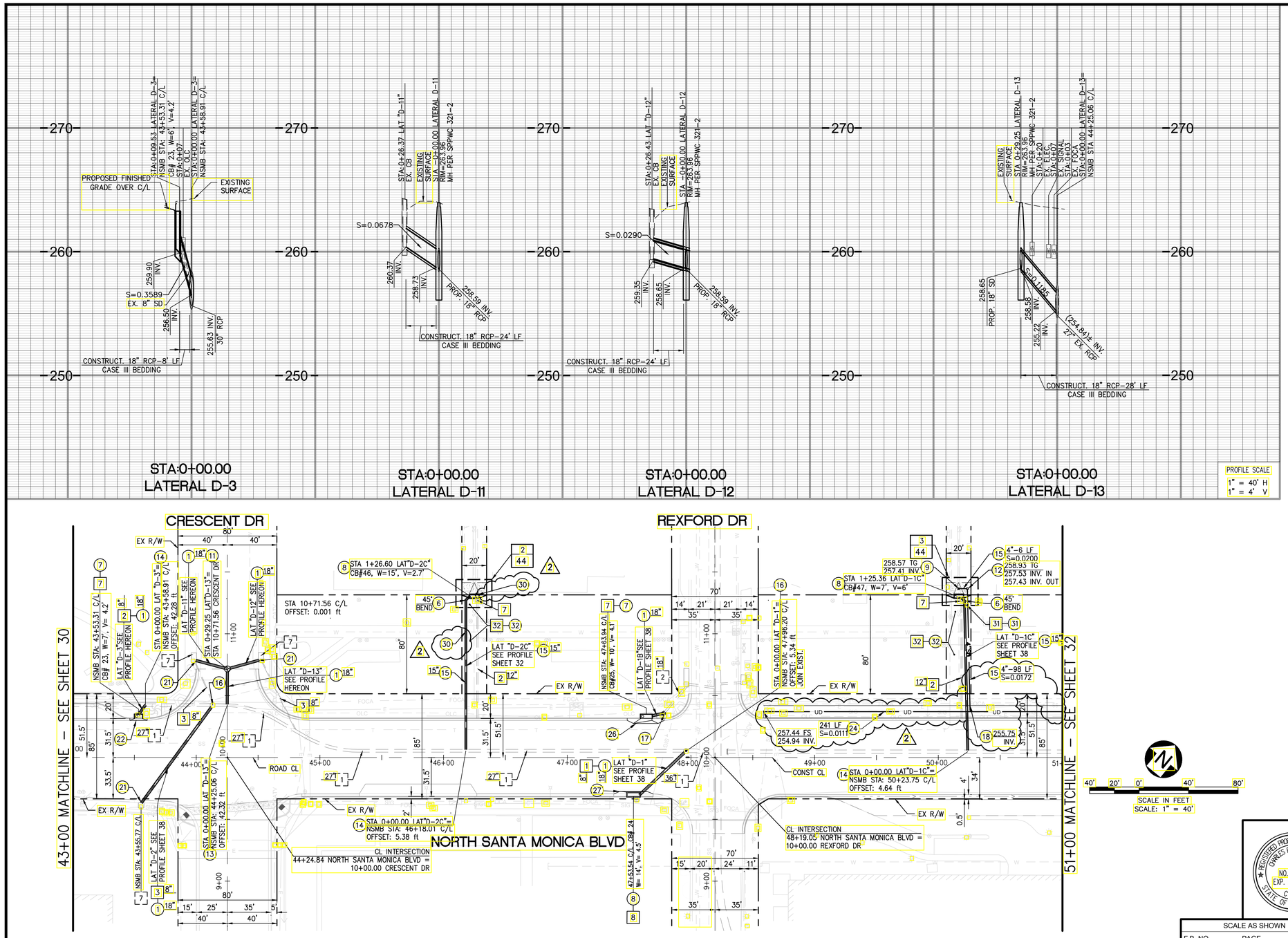
JOB NO. 2184
DRAWING NO. 7449
SHEET 30 OF 85 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT



STORM DRAIN CONSTRUCTION NOTES:

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- REMODEL EXISTING
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- REMOVE & RECONSTRUCT
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- ## — DETAIL NO.
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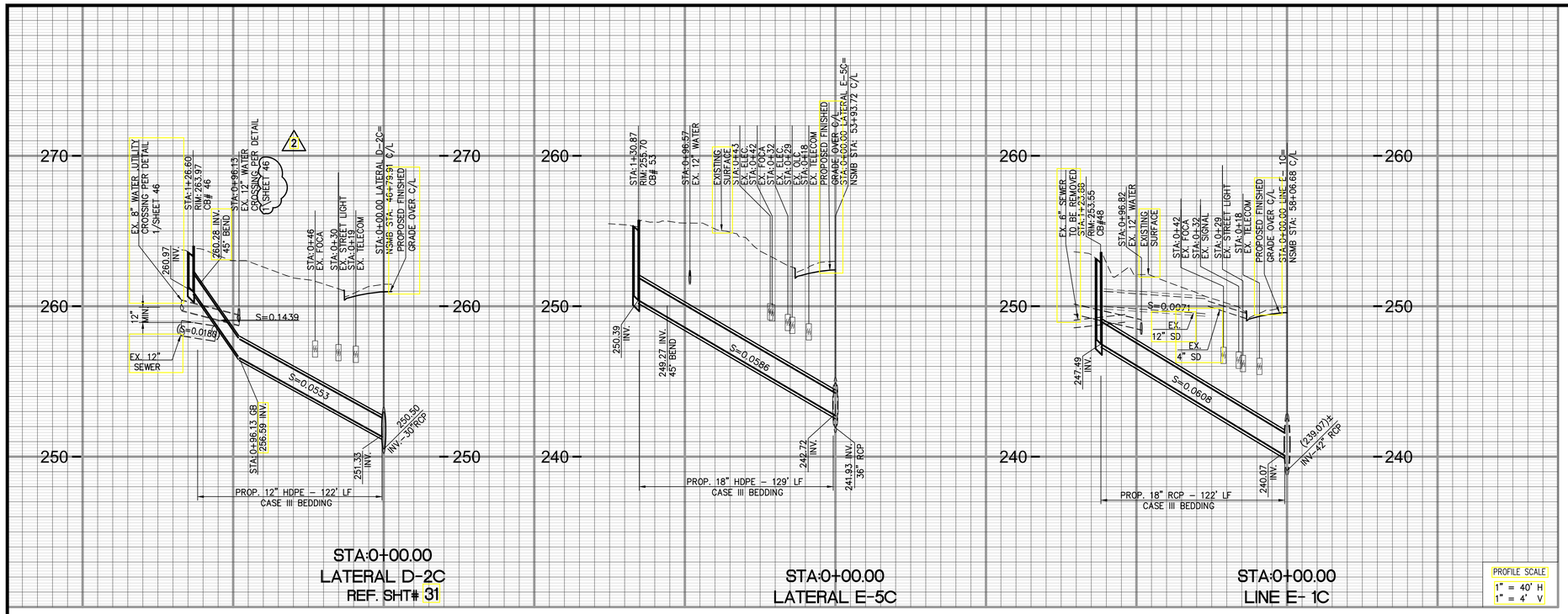

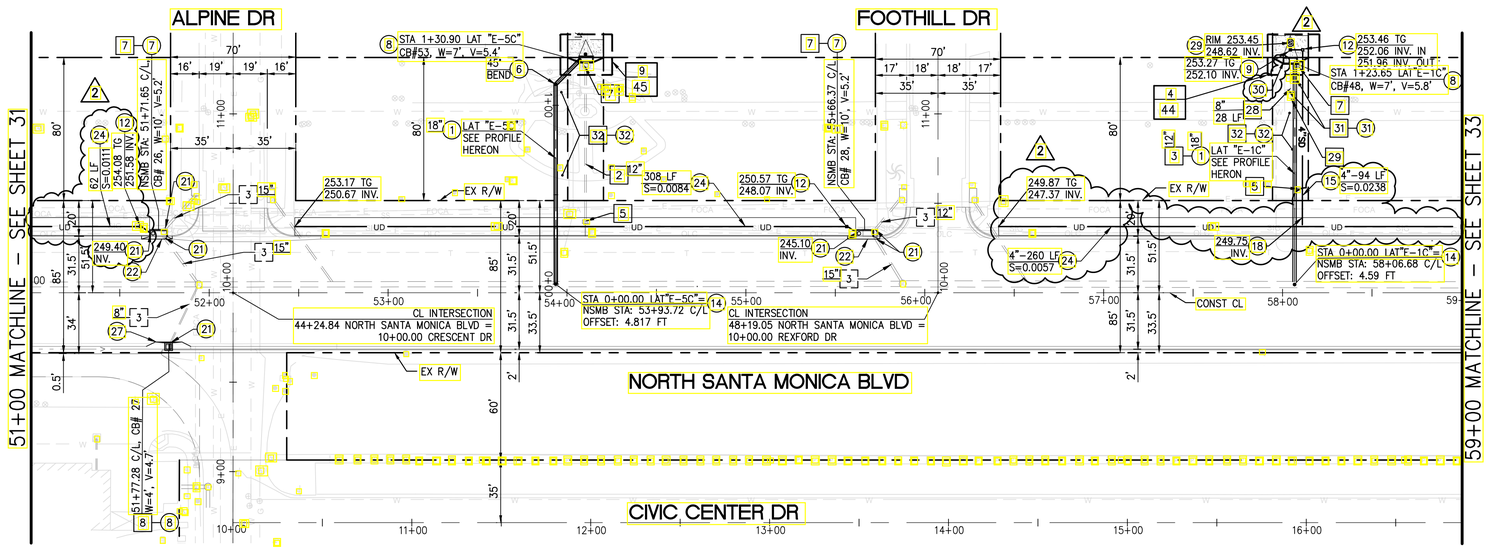

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CHARLES R. HEFFERNAN PE 40759 04/ 08/ 2016 DATE

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

STORM DRAIN

WILSHIRE BOULEVARD TO DOHENY DRIVE

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SHEET 32 OF 85 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
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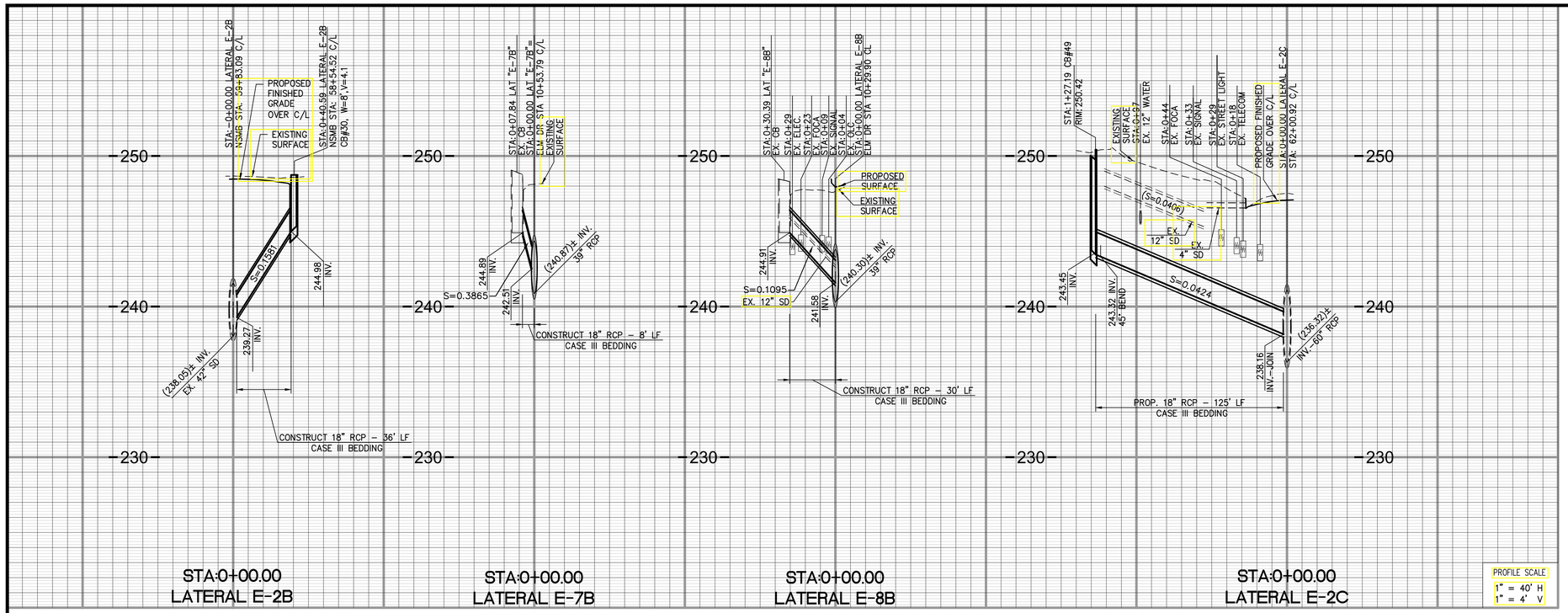

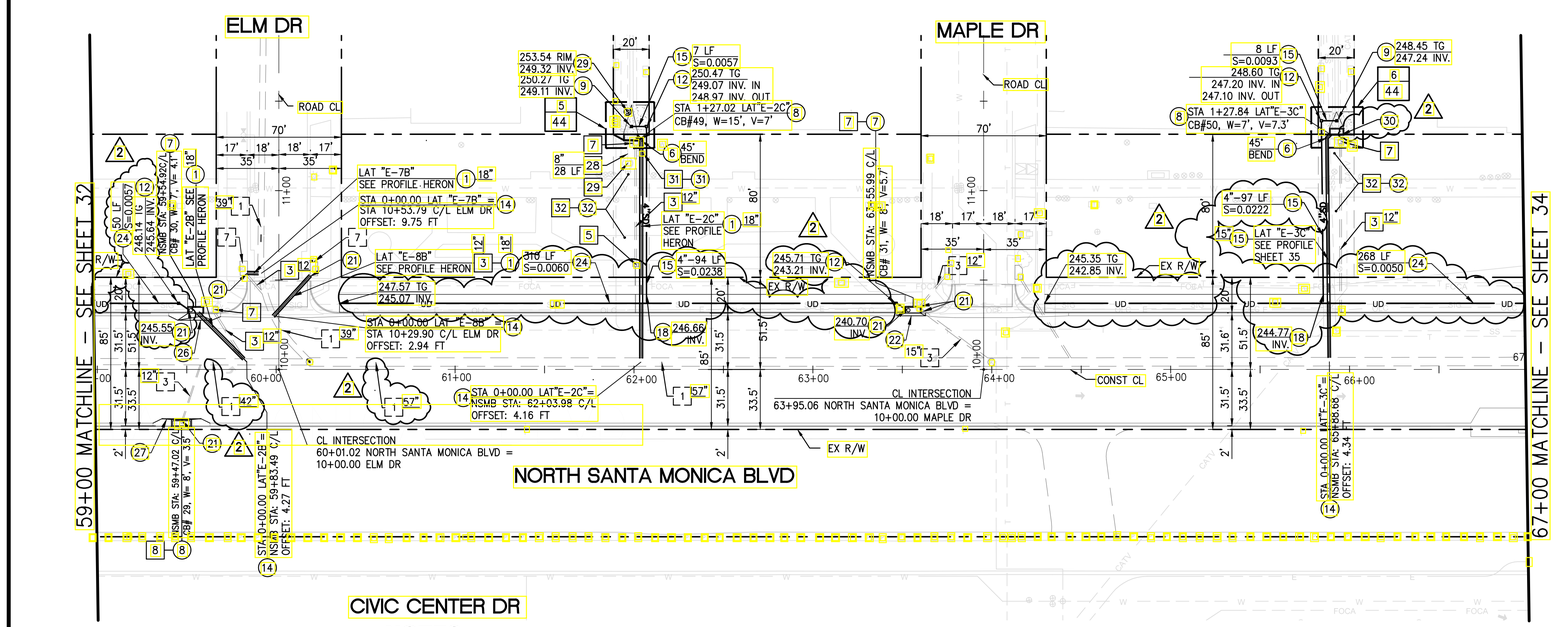

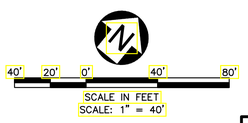

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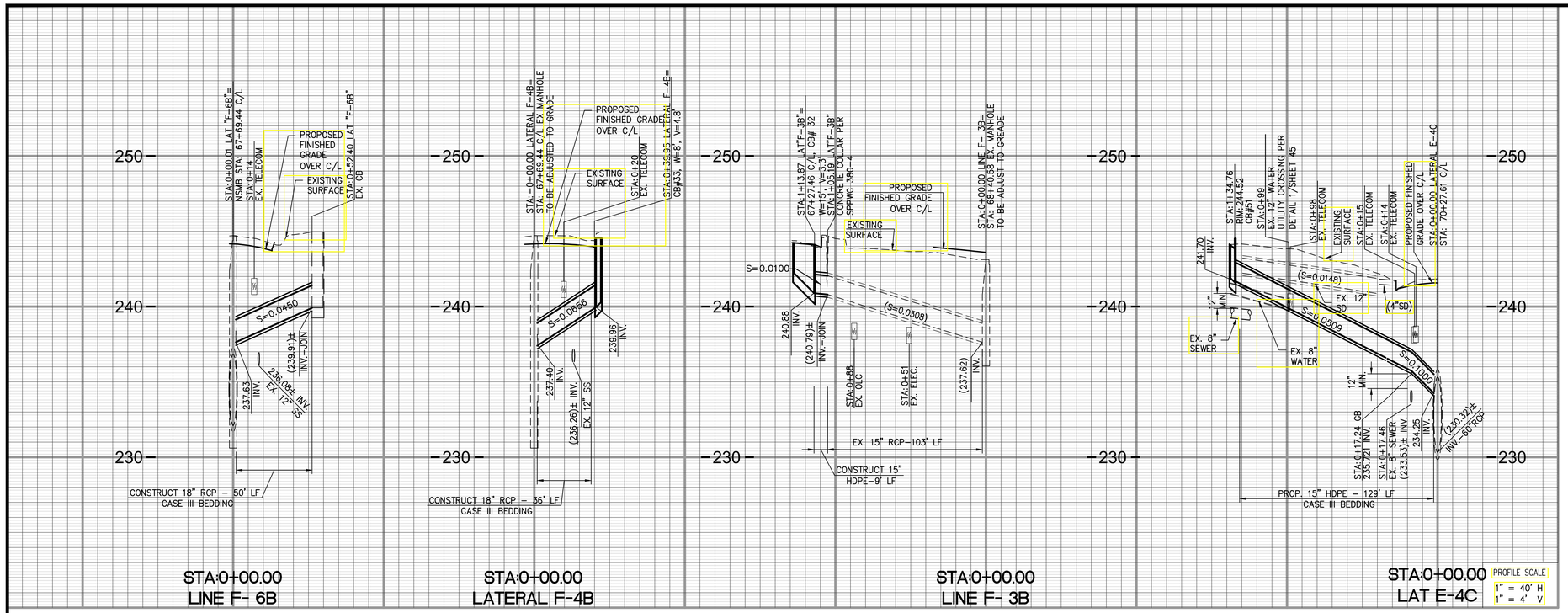

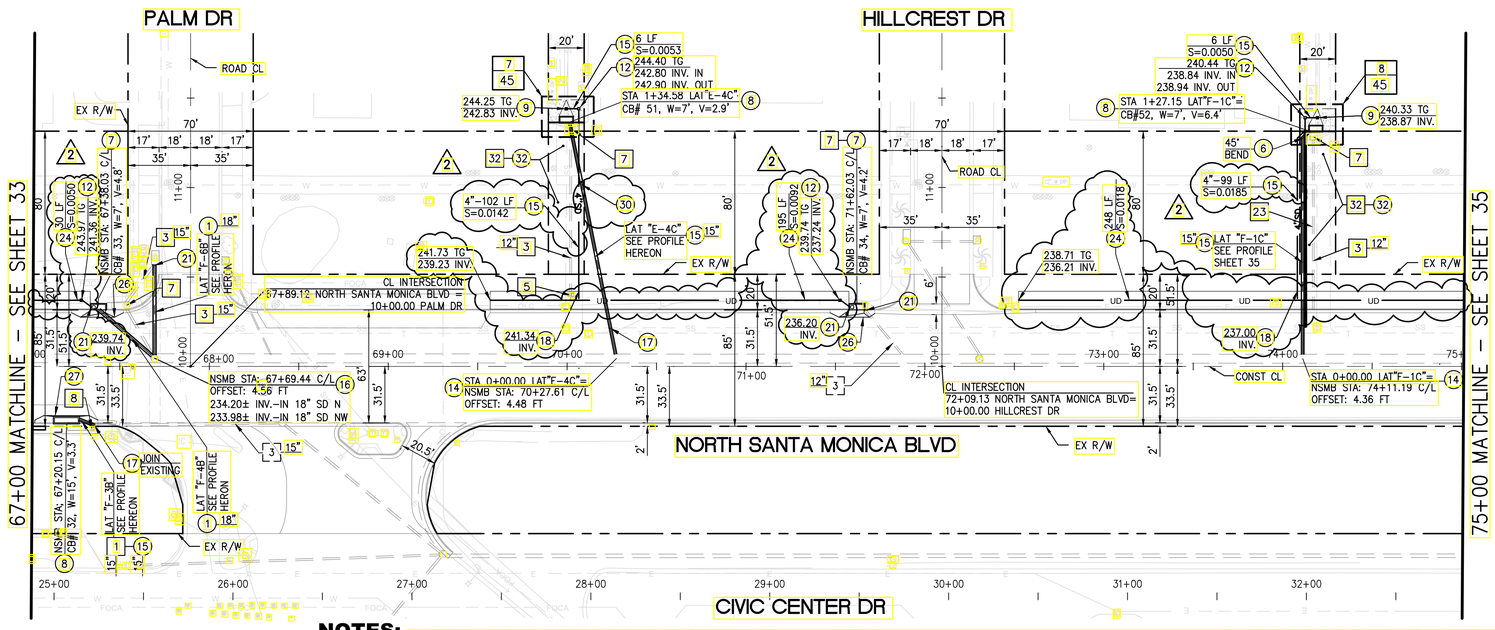

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8. CURB OPENING CATCH BASIN WITH GRATING PER SPPWC STD. PLAN 302–3, FRAME AND GRATING (BICYCLE SAFE) PER CITY OF LA STANDARD PLAN S–342–4 (SIZE PER PLAN) WITH CONNECTOR PIPE SCREEN (CPS) AND AUTOMATIC RETRACTABLE SCREEN (ARS) WINGATE BY UNITED STORM WATER, OR APPROVED EQUAL
9. BROOKS CATCH BASIN NO. 1212 WITH TRAFFIC GRATE
10. MANHOLE PER SPPWC STD. PLAN 320–2 (MAIN LINE ID ≥ 36")
11. MANHOLE PER SPPWC STD. PLAN 321–2 (MAIN LINE ID < 33")
12. BROOKS CATCH BASIN NO. 1212 WITH TRAFFIC COVER
13. JUNCTION STRUCTURE PER SPPWC STD. PLAN 331–3
14. JUNCTION STRUCTURE PER SPPWC STD. PLAN 332–2
15. HDPE STORM DRAIN PIPE (DR 17), SIZE PER PLAN
16. CONNECT TO EXISTING STORM DRAIN PER SPPWC STD. PLAN 335–2
17. CONCRETE COLLAR PER SPPWC STD. PLAN 380–4
18. 12"X12"X2" CONCRETE MAT WITH WELDED WIRE MESH PER DETAIL3/SHEET 43
19. TRANSITION STRUCTURE PER SPPWC STD. PLAN 340–2, PIPE TO PIPE (SIZE PER PLAN)
20. STORM DRAIN INSTALLATION DETAIL, SEE ROADWAY IMPROVEMENT PLAN SHEET 5.
21. MONOLITHIC CATCH BASIN CONNECTION PER SPPWC STD. PLAN 308–2
22. CATCH BASIN LOCAL DEPRESSION PER SPPWC STD. PLAN 313–3, CASE E
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29. TERMINAL MANHOLE "Q" PER CITY OF BEVERLY HILLS STD. PLAN BH–206 AND NON–ROCKING MANHOLE FRAME AND COVER PER CITY OF BEVERLY HILLS STD. PLAN BH–208
30. UTILITY CROSSING PER DETAIL 1/SHEET 46 (2)
31. EXISTING WATER STRUCTURE
32. LANDSCAPING

UTILITY LEGEND

- SS — EXISTING SANITARY SEWER
- T — EXISTING TELECOMM (AT&T)
- SIG — EXISTING SIGNAL INTERCONNECT
- OLC — EXISTING UG– STREET LIGHT
- FOCA — EXISTING FIBER (OPTIC CITY)
- CATV — EXISTING CATV
- UD — UNDER DRAIN PIPE
- E — EXISTING ELEC SCE
- G — EXISTING GAS
- W — EXISTING WATER
- EXISTING STORM DRAIN
- NEW STORM DRAIN

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3. SEE SHEETS 39 TO 46 FOR CATCH BASIN LOCAL DEPRESSION AND ALLEY DETAILS.
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9. SLURRY FILL SD OPTION

REGISTERED PROFESSIONAL ENGINEER CHARLES R. HEFFERNAN NO. 40759 EXP. 03/31/17 CIVIL STATE OF CALIFORNIA

PSOMAS
555 South Flower Street, Suite 4300
Los Angeles, CA 90071
(213) 223–1400 (213) 223–1444 (FAX)
CHARLES R. HEFFERNAN PE 40759 04/ 08/ 2016 DATE

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

STORM DRAIN

WILSHIRE BOULEVARD TO DOHENY DRIVE

SCALE AS SHOWN

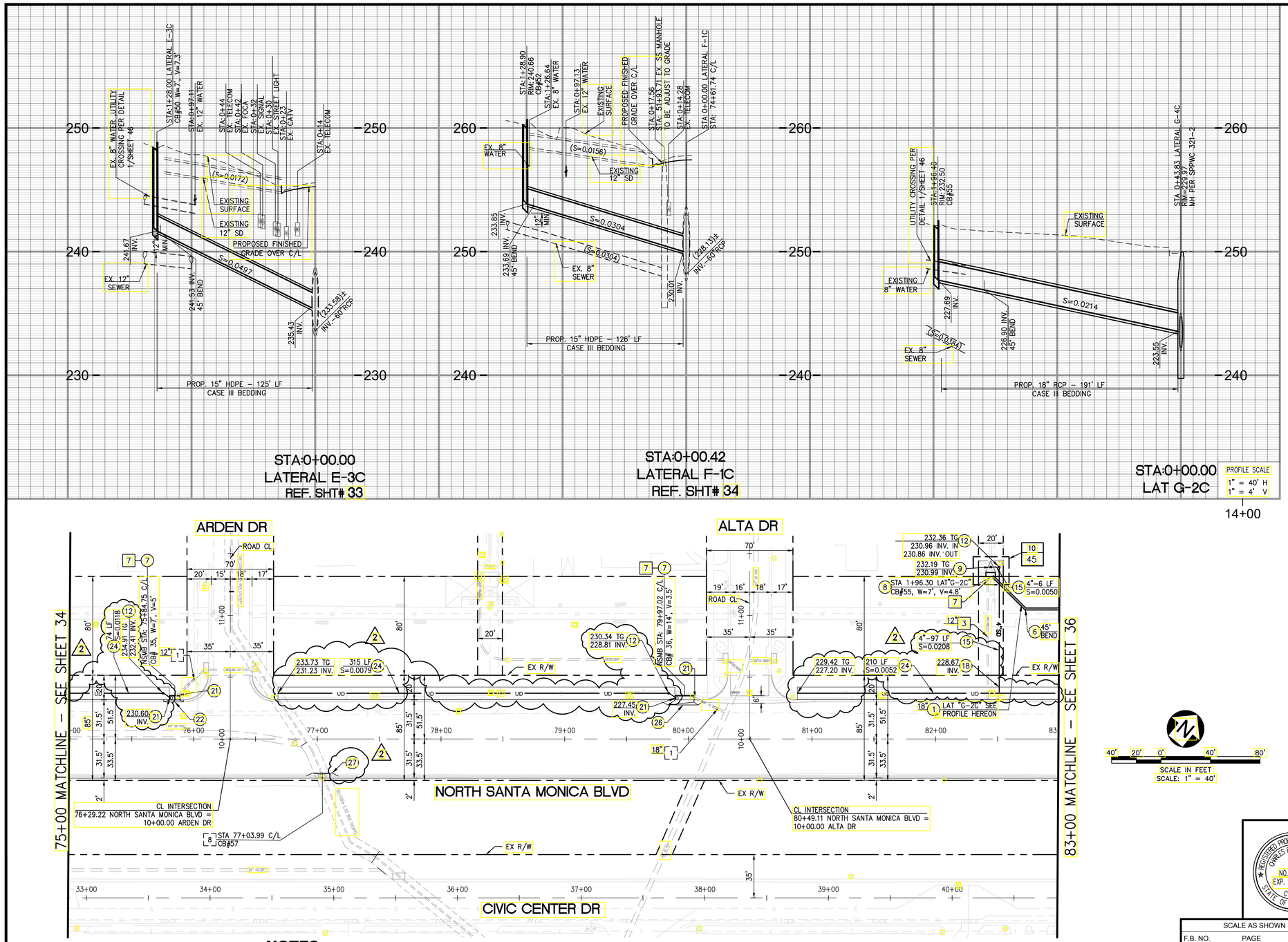
F.B. NO.	PAGE	TO
DESIGNED	MM	DATE 02/ 03/ 2016
DRAWN	SA	DATE 02/ 03/ 2016
CHECKED	KK	DATE 02/ 03/ 2016

DATE	REVISION	BY
06/02/16	2 ADDENDUM NO. 2	SA

SUBMITTED ____ DATE ____
APPROVED ____ DATE 04/ 08/ 2016

JOB NO. 2184
DRAWING NO. 7449
SHEET 34 OF 85 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT



STORM DRAIN CONSTRUCTION NOTES:

- CONSTRUCT
- REMODEL EXISTING
- EXISTING (PROTECT IN PLACE)
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- REMOVE
- WORK BY OTHERS
- ## — DETAIL NO.
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1. R.C.P. STORM DRAIN, D-LOAD = 2000, SIZE PER PLAN
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REGISTERED PROFESSIONAL ENGINEER
CHARLES R. HEFFERNAN
NO. 40759
EXP. 03/31/17
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(213) 223-1400 (213) 223-1444 (FAX)
CHARLES R. HEFFERNAN PE 40759 04/ 08/ 2016 DATE

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

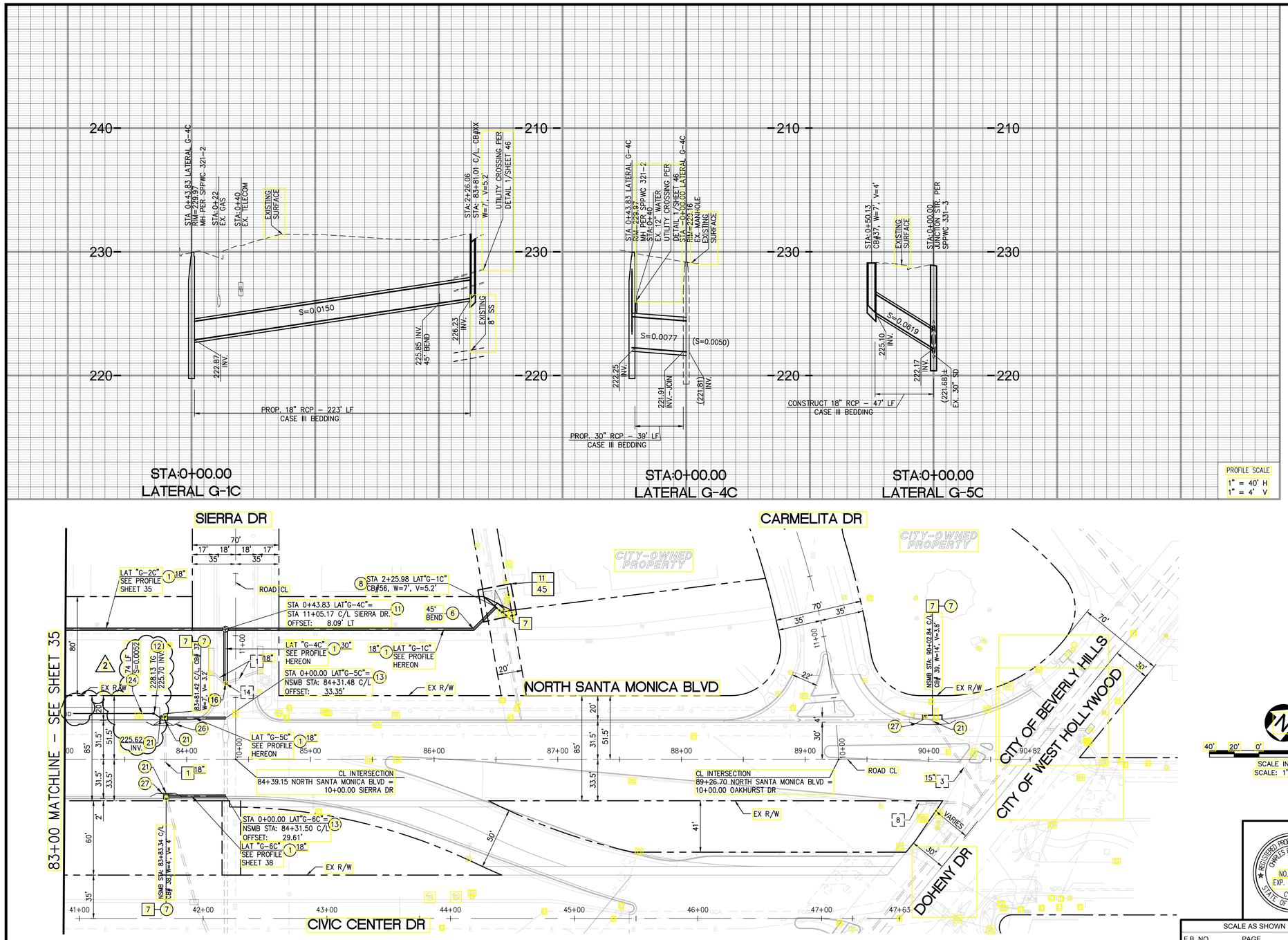
STORM DRAIN

WILSHIRE BOULEVARD TO DOHENY DRIVE

SUBMITTED _____ DATE _____
APPROVED _____ DATE 04/ 08/ 2016

JOB NO. 2184
DRAWING NO. 7449
SHEET 35 OF 85 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT



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32. LANDSCAPING

UTILITY LEGEND

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PSOMAS
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Los Angeles, CA 90071
(213) 223-1400 (213) 223-1444 (FAX)
CHARLES R. HEFFERNAN PE 40759 04/ 08/ 2016 DATE

REGISTERED PROFESSIONAL ENGINEER CHARLES R. HEFFERNAN NO. 40759 EXP. 03/31/17 CIVIL STATE OF CALIFORNIA

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

STORM DRAIN

WILSHIRE BOULEVARD TO DOHENY DRIVE

SCALE AS SHOWN

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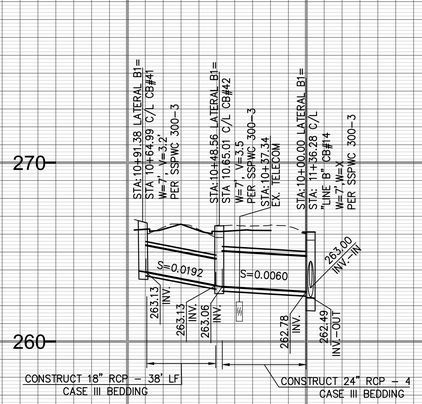
JOB NO. 2184
DRAWING NO. 7449
SHEET 36 OF 85 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT



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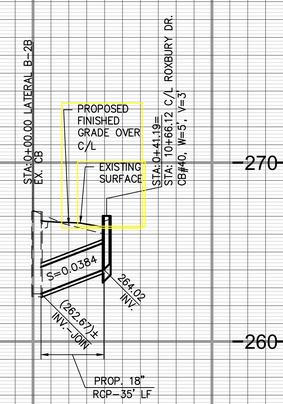

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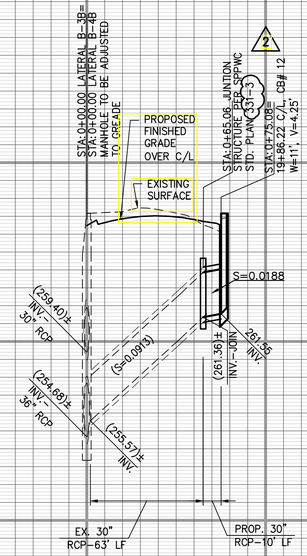

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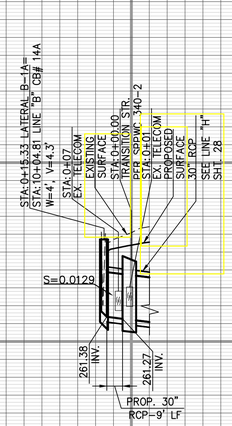

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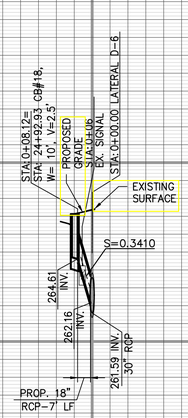

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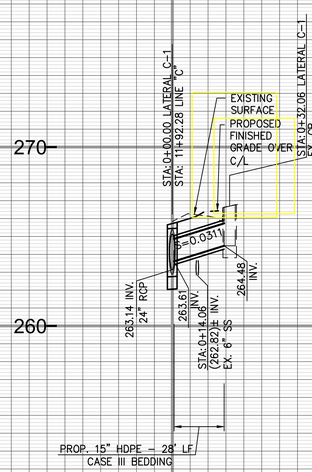

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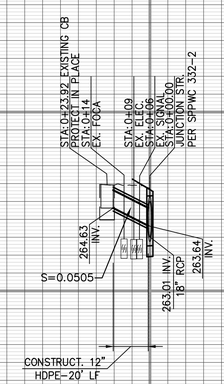
REF. SHT# 29



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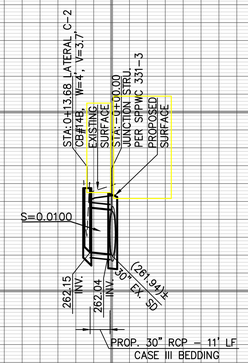
REF. SHT# 29



STA:0+00.00
LATERAL C-2
REF. SHT# 28

PROFILE SCALE
1" = 40' H
1" = 4' V

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

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PROJECT:
NORTH SANTA MONICA BOULEVARD
RECONSTRUCTION

LATERAL PROFILES

WILSHIRE BOULEVARD TO DOHENY DRIVE

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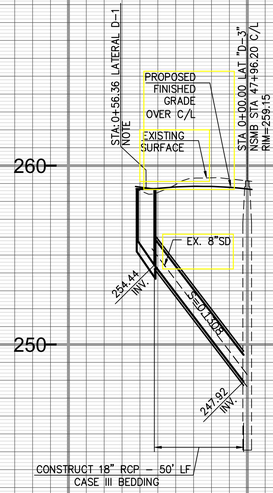
CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT



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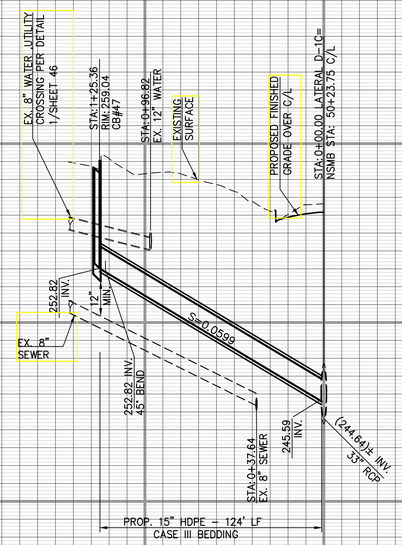
REF. SHT# 31



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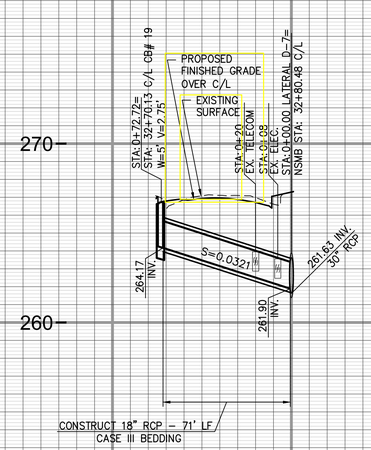

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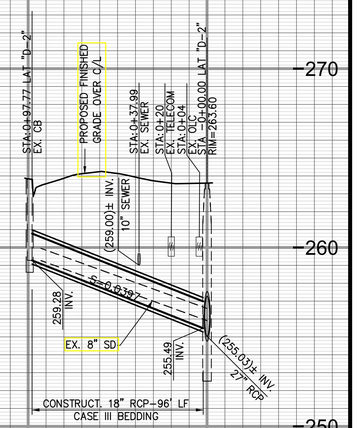
REF. SHT# 29



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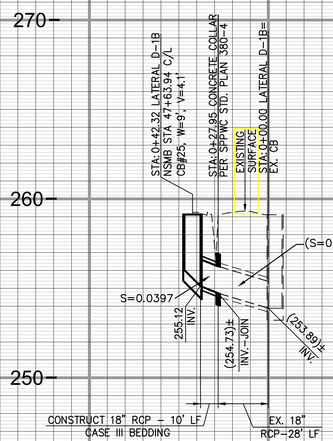

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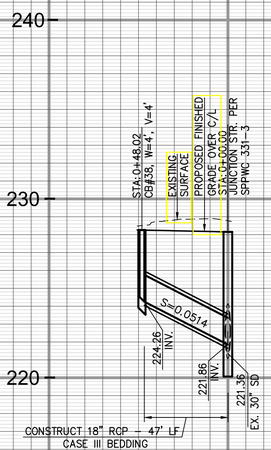

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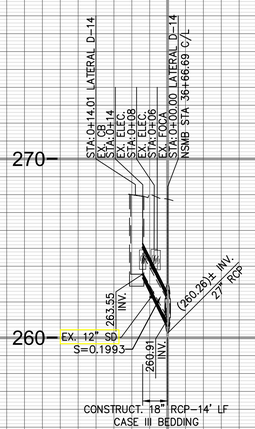

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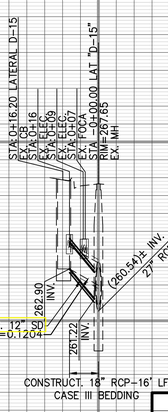
REF. SHT# 30

2



STA:0+00.00
LATERAL D-15
REF. SHT# 30

2

PROFILE SCALE
1" = 40' H
1" = 4' V

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

Underground Service Alert
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WARNING:
BEFORE STARTING WORK ON EXISTING SERIES STREET LIGHTING CIRCUITS, CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM THE SERVING UTILITY. CUT-OUT PLUGS MUST BE PULLED AND "MEN AT WORK" SIGNS POSTED BEFORE ANY WORK IS DONE OR CONNECTIONS MADE.

PSOMAS
555 South Flower Street, Suite 4300
Los Angeles, CA 90071
(213) 223-1400 (213) 223-1444 (FAX)
CHARLES R. HEFFERNAN PE 40759 DATE 04/ 08/ 2016

REGISTERED PROFESSIONAL ENGINEER
CHARLES R. HEFFERNAN
NO. 40759
EXP. 03/31/17
CIVIL
STATE OF CALIFORNIA

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

LATERAL PROFILES

WILSHIRE BOULEVARD TO DOHENY DRIVE

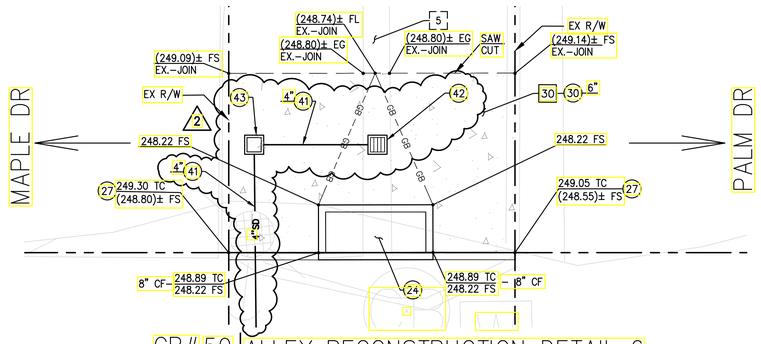
SCALE AS SHOWN			
F.B. NO.	PAGE	TO	
DESIGNED	MM	DATE	02/ 03/ 2016
DRAWN	SA	DATE	02/ 03/ 2016
CHECKED	KK	DATE	02/ 03/ 2016

DATE	REVISION	BY
06/02/16	2 ADDENDUM NO. 2	SA

SUBMITTED DATE
APPROVED DATE 04/ 08/ 2016

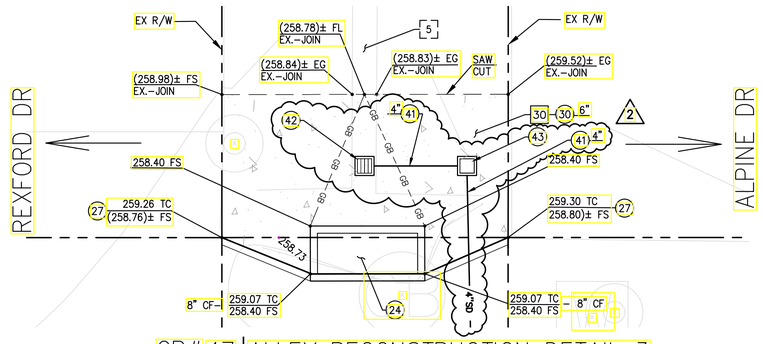
JOB NO. 2184
DRAWING NO. 7449
SHEET 38 OF 85 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT



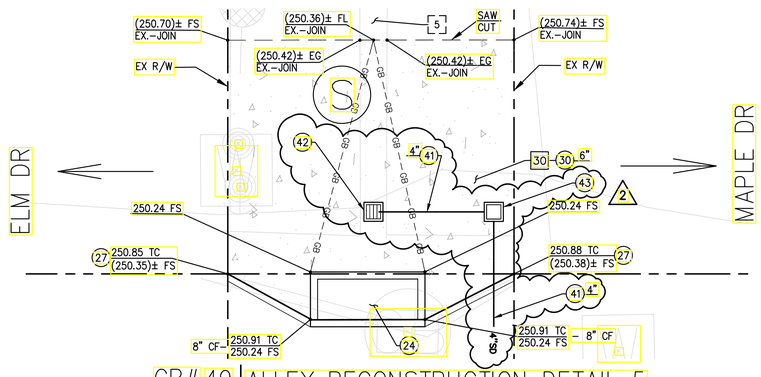
CB# 50 ALLEY RECONSTRUCTION DETAIL 6

REF. SHT. 33 1" = 5'



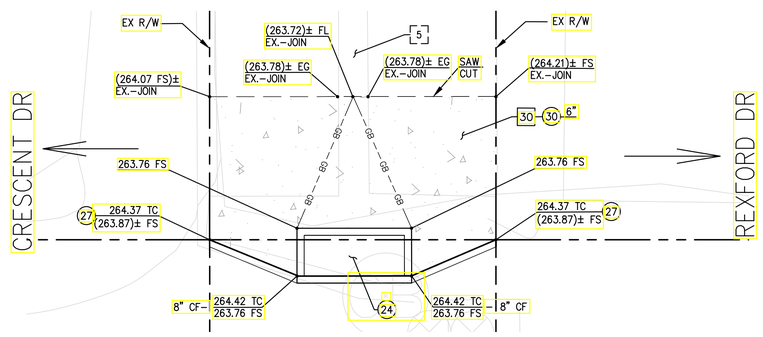
CB# 47 ALLEY RECONSTRUCTION DETAIL 3

REF. SHT. 31 1" = 5'



CB# 49 ALLEY RECONSTRUCTION DETAIL 5

REF. SHT. 33 1" = 5'



CB# 46 ALLEY RECONSTRUCTION DETAIL 2

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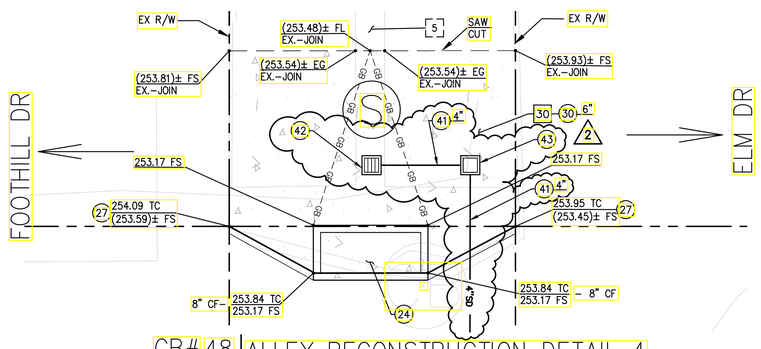
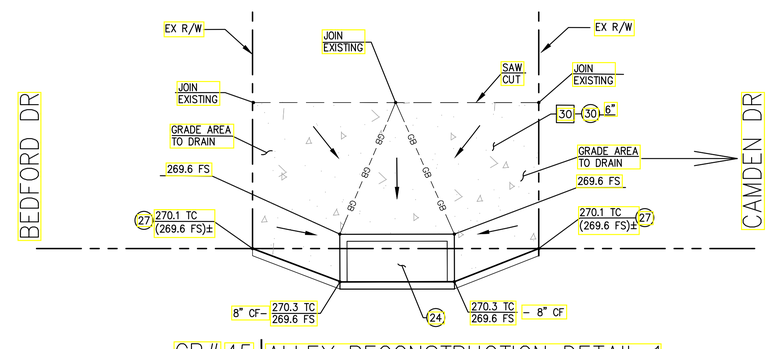


CB# 48 ALLEY RECONSTRUCTION DETAIL 4

REF. SHT. 32 1" = 5'



CB# 45 ALLEY RECONSTRUCTION DETAIL 1

REF. SHT. 28 1" = 5'

CONSTRUCTION NOTES:

- CONSTRUCT
- EXISTING (PROTECT IN PLACE)
- REMOVE
- REMODEL EXISTING
- REMOVE & RECONSTRUCT
- WORK BY OTHERS

5. LONGITUDINAL ALLEY GUTTER PER CITY OF BEVERLY HILLS STD. PLAN BH 111.
24. CATCH BASIN PER STORM DRAIN IMPROVEMENT PLANS.
27. CONCRETE CURB PER SPPWC STD PLAN 120-2, TYPE A1-6.
30. PCC PAVEMENT. (DEPTH PER PLAN)
41. HDPE STORM DRAIN PIPE (DR 17), SIZE PER PLAN
42. BROOKS CATCH BASIN NO. 1212 WITH TRAFFIC GRATE
43. BROOKS CATCH BASIN NO. 1212 WITH TRAFFIC COVER

LEGEND

- PCC
- SAWCUT
- STORM DRAIN LINE

REGISTERED PROFESSIONAL ENGINEER CHARLES R. HEFFERNAN NO. 40759 EXP. 03/31/17 CIVIL STATE OF CALIFORNIA

SCALE AS SHOWN			
F.B. NO.	PAGE	TO	
DESIGNED	MM	DATE	1/ 29/ 2016
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PSOMAS
555 South Flower Street, Suite 4300
Los Angeles, CA 90071
(213) 223-1400 (213) 223-1444 (FAX)
CHARLES R. HEFFERNAN PE 40759 04/ 08/ 2016 DATE

PROJECT:

NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

STORM DRAIN

WILSHIRE BOULEVARD TO DOHENY DRIVE

SUBMITTED _____ DATE _____

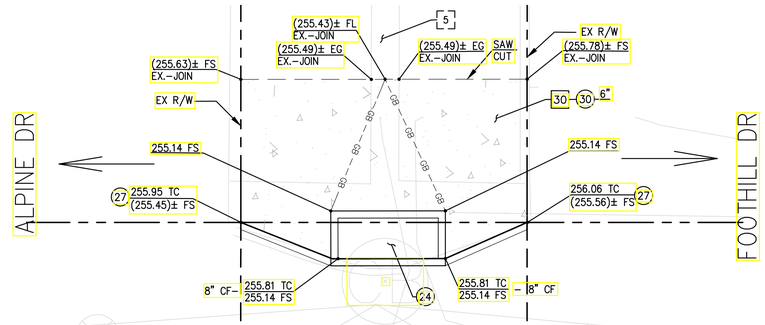
APPROVED _____ DATE 04/ 08/ 2016

JOB NO. 2184 DRAWING NO. 7449

SHEET 44 OF 85 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT

DWG Name: W:\1BEV041000\ENGR\SHEETS\SD\SD-43.dwg Plotted by: salman.ahmed on May 26, 2016 - 17:21:05



CB# 53 ALLEY RECONSTRUCTION DETAIL 9

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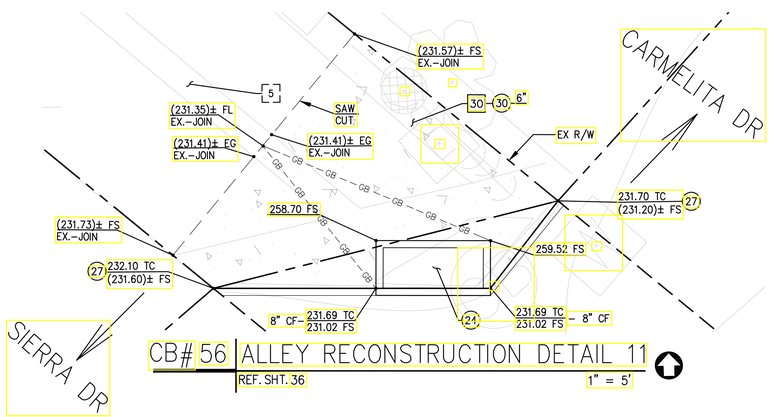

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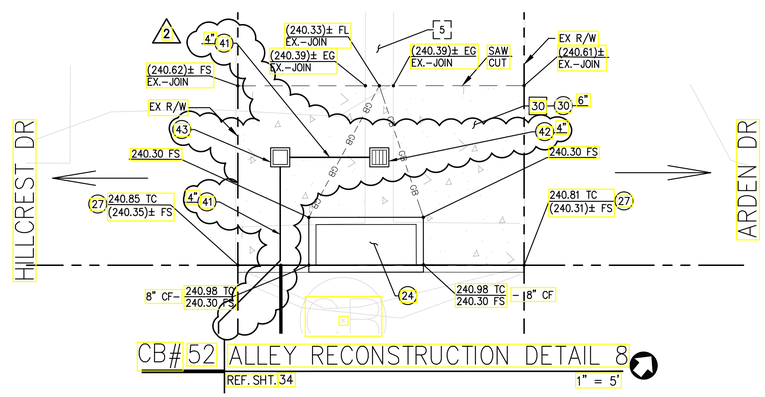

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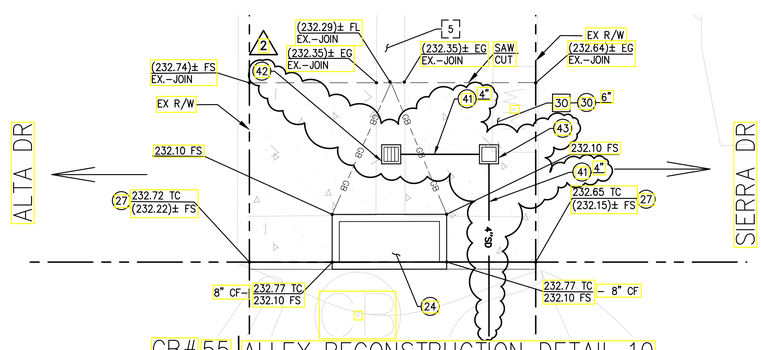

CB# 55 ALLEY RECONSTRUCTION DETAIL 10

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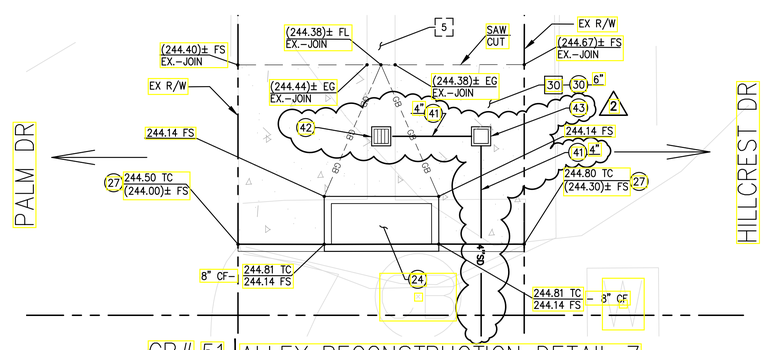

CB# 51 ALLEY RECONSTRUCTION DETAIL 7

REF. SHT. 34 1" = 5'

CONSTRUCTION NOTES:

- CONSTRUCT
- EXISTING (PROTECT IN PLACE)
- REMOVE
- REMODEL EXISTING
- REMOVE & RECONSTRUCT
- WORK BY OTHERS

5. LONGITUDINAL ALLEY GUTTER PER CITY OF BEVERLY HILLS STD. PLAN BH 111.
24. CATCH BASIN PER STORM DRAIN IMPROVEMENT PLANS.
27. CONCRETE CURB PER SPPWC STD PLAN 120–2, TYPE A1–6.
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2 41. HDPE STORM DRAIN PIPE (DR 17), SIZE PER PLAN
42. BROOKS CATCH BASIN NO. 1212 WITH TRAFFIC GRATE
43. BROOKS CATCH BASIN NO. 1212 WITH TRAFFIC COVER

LEGEND

- PCC
- SAWCUT
- STORM DRAIN LINE

REGISTERED PROFESSIONAL ENGINEER CHARLES R. HEFFERNAN NO. 40759 EXP. 03/31/17 CIVIL STATE OF CALIFORNIA

SCALE AS SHOWN			
F.B. NO.	PAGE	TO	
DESIGNED	MM	DATE	1/29/2016
DRAWN	SA	DATE	1/29/2016
CHECKED	KK	DATE	1/29/2016

DATE	REVISION	BY
06/02/16	2 ADDENDUM 2	SA

PSOMAS
555 South Flower Street, Suite 4300
Los Angeles, CA 90071
(213) 223-1400 (213) 223-1444 (FAX)
CHARLES R. HEFFERNAN PE 40759 04/08/2016 DATE

PROJECT:

NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

STORM DRAIN

WILSHIRE BOULEVARD TO DOHENY DRIVE

SUBMITTED _____ DATE _____

APPROVED _____ DATE 04/08/2016

JOB NO. 2184 DRAWING NO. 7449

SHEET 45 OF 85 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT

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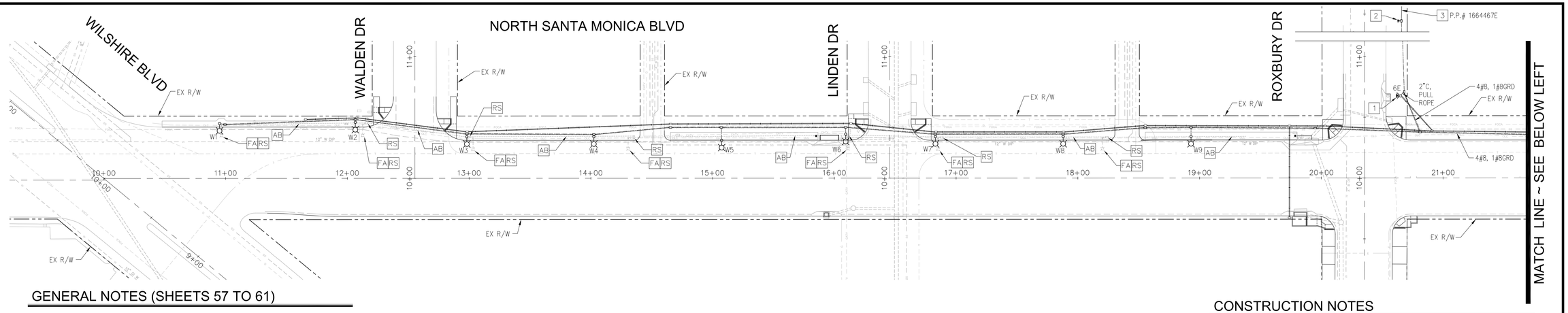


GENERAL NOTES (SHEETS 57 TO 61)

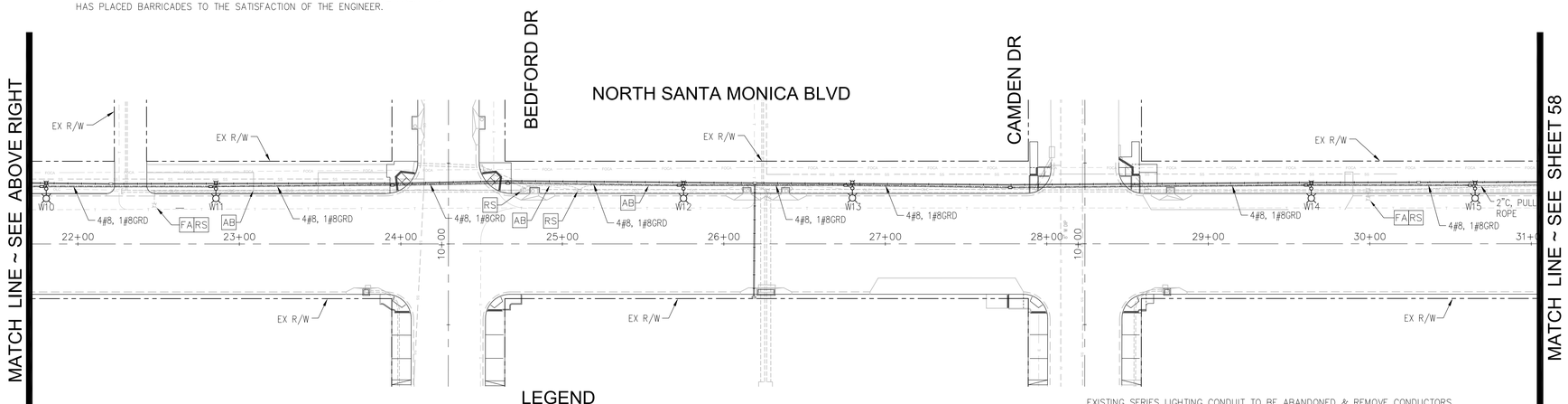
1. ALL WORK DETAILED ON THESE CONSTRUCTION DRAWINGS, EXCEPT AS OTHERWISE STATED IN THE CONTRACT SPECIFICATIONS, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF BEVERLY HILLS STANDARD CONTRACTUAL REQUIREMENTS, AMERICAN PUBLIC WORKS ASSOCIATION STANDARD PLANS AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AND STATE OF CALIFORNIA STANDARD PLANS AND SPECIFICATIONS, 2015 EDITION.
2. EXISTING UNDERGROUND UTILITIES ARE SHOWN AS PER AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION AND ELEVATION, IF REQUIRED IN THE FIELD PRIOR TO BEGINNING CONSTRUCTION OF THE NEW FACILITIES.
3. ALL P.C.C. AND A.C. REMOVALS SHALL BE OUTLINED TO NECESSARY WORKING LIMITS AND SAWCUT TO A MINIMUM DEPTH OF 2 INCHES PRIOR TO THE REMOVAL. UNLESS OTHERWISE STATED IN THE SPECIAL PROVISIONS, ALL DEBRIS CREATED BY THE REMOVAL OPERATIONS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF AWAY FROM THE JOB SITE IN A MANNER AND AT A LOCATION ACCEPTABLE TO ALL AGENCIES AFFECTED BY THE WORK.
4. TRAFFIC CONTROL DURING CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
5. IN ALL OPERATIONS, THE REQUIREMENTS OF THE STATE DIVISION OF INDUSTRIAL SAFETY FOR TRENCHES, EXCAVATIONS AND SHORING SHALL APPLY. SAFETY IS STRESSED. ANY OPERATION OR SITUATION THAT THREATENS THE SAFETY OF WORKERS OR THE PUBLIC, INCLUDING IMPROPER TRAFFIC CONTROL, SHALL CAUSE THE SUSPENSION OF WORK UNTIL CORRECTIONS ARE MADE.
6. ALL OPEN EXCAVATIONS WITHIN A STREET SHALL BE STEEL PLATED AT ALL TIMES, EXCEPT WHEN THE CONTRACTOR IS PHYSICALLY WORKING WITHIN THE AREA AND HAS PLACED BARRICADES TO THE SATISFACTION OF THE ENGINEER.
7. THE CONTRACTOR SHALL CONDUCT CONSTRUCTION OPERATIONS IN SUCH A MANNER THAT STORM OR OTHER WATERS MAY PROCEED UNINTERRUPTED AND WITHOUT EROSION ALONG THEIR EXISTING STREET OR DRAINAGE COURSE.
8. IN THE COURSE OF RUNOFF WATER CONTROL, THE CONTRACTOR SHALL PROTECT ALL WATER COURSES, THE GROUND WATER AND BODIES OF WATER FROM POLLUTION BY FUELS, OILS, BITUMENS OR OTHER HARMFUL MATERIALS.
9. HARD HATS AND HIGH VISIBILITY FLUORESCENT VESTS SHALL BE WORN AT ALL TIMES WHEN WORKING ON THE PROJECT.
9. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT 48 HOURS PRIOR TO ANY EXCAVATION. TELEPHONE: (800) 422-4133.
10. THE CONTRACTOR SHALL NOTIFY THE CITY OF BEVERLY HILLS PUBLIC WORKS DEPARTMENT 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
11. STREET/HOLIDAY LIGHTING CONDUIT SHALL BE INSTALLED BY THE DIRECTION BORING METHOD OR AS DIRECTED BY THE CITY INSPECTOR.
12. EXISTING SIGNS ON ELECTOLIERS TO BE REMOVED AND SHALL INSTALL NEW SIGNS ON NEW ELECTROLIERS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE CITY INSPECTOR.
13. FAILURE TO COMPLY WITH ANY OF THE ABOVE ITEMS SAHLL BE SUFFICIENT CAUSE FOR THE CITY TO ARRANGE FOR THE NECESSARY WORK TO BE PERFORMED BY OTHERS. ANY COSTS INCURRED TO COMPLETE THE NECESSARY WORK WILL BE CHARGED TO THE CONTRACTOR.
14. ALL WIRING FROM PULL BOXES TO FIXTURES SHALL BE #10 SOLID WIRE.
15. ALL NEW ELECTROLIERS WITH NEW BASES SHALL BE INSTALLED WITH 2" GALVANIZED RIGID STREET CONDUIT WITH SWEEP AND PULL ROPE FROM ADJACENT PULL BOX TO BASE OF POLE.
16. THE CONTRACTOR SHALL COORDINATE WITH SCE AND CONTACT THOMAS YOLAS AT (310) 315-3258 MINIMUM OF FOUR (4) WEEKS IN ADVANCE OF WORK FOR ESTABLISHING SERVICE FOR NEW STREET LIGHTING SYSTEM.
17. PULL ROPE SHALL BE INSTALLED THROUGH VACANT 4" CONDUIT FOR FUTURE COMMUNICATION USE WITH END CAPS IN PULL BOXES.
18. INSTALL CONCRETE PAD FOR STANDING AREA IF NEW TYPE 336S AND TYPE III-CF IS INSTALLED IN PARKWAY.

CONSTRUCTION NOTES

1. FURNISH AND INSTALL TYPE 336S CONTROLLER CABINET ON NEW FOUNDATION. EXACT LOCATION OF CABINET SHALL BE DETERMINED BY CITY ENGINEER.
2. INSTALL 120/240V TYPE III-CF (DUAL METER) SERVICE EQUIPMENT ENCLOSURE, MYERS MEUG24-M100 OR APPROVED EQUAL WITH TORK 4-CHALNNEL PROGRAMMABLE TIMER, TYPE V PEC, CONTRACTOR (DP), TESTSWITCH AND 2-40 AMP (2-POLE) LIGHTING BREAKERS, 1-40 AMP (1-POLE) BANNER LIGHTING BREAKERS AND X-40 AMP (1-POLE) TREE LIGHTING BREAKERS. LIGHTING CIRCUITS SHALL BE 240V METERED AND BANNER AND TREE LIGHTING CIRCUITS SHALL BE 120V ON A SEPARATE METER.
3. PRELIMINARY SERVICE POINT LOCATION. INSTALL 3" CONDUIT WITH PULL ROPE PER SCE REQUIREMENTS. AT MINIMUM FOUR (4) WEEKS IN ADVANCE NOTICE SHALL BE GIVEN TO SOUTHERN CALIFORNIA EDISON BY CONTACTING THOMAS YOLAS AT (310)315-3258. FINAL SERVICE LOCATION AND EXACT CONDUIT LOCATION SHALL BE DETERMINED BY SCE IN THE FIELD.

QUANTITY SUMMARY

CIRCUIT	192W LED	44/192W LED	192W/192W LED	71W/192W LED
W1	9	–	–	–
W10	–	6	–	–
W16	–	–	4	–
W20	2	4	2	–
W28	5	–	–	–
W33	9	–	–	–
W41	6	–	–	–
W47	6	–	–	–
W53	6	–	–	–
W59	6	–	–	–
W66	3	–	–	1
TOTAL	52	10	6	1



LEGEND

- PROPOSED ELETROLIER WITH 192 INPUT WATTS LED LUMINAIRE (240V) AND RECEPTACLE FOR BANNER LIGHTING (120V), 6' ARM
- PROPOSED ELETROLIER WITH 44/192 INPUT WATTS LED LUMINAIRE (240V) AND RECEPTACLE FOR BANNER LIGHTING (120V), 2' & 6' ARMS
- PROPOSED DUAL ELETROLIER WITH 192 INPUT WATTS LED LUMINAIRE (240V) AND RECEPTACLE FOR BANNER LIGHTING (120V), 6' & 8' ARMS
- PROPOSED DUAL ELETROLIER WITH 71/192 INPUT WATTS LED LUMINAIRE (240V) AND RECEPTACLE FOR BANNER LIGHTING (120V), 4' & 6' ARMS
- FA — FOUNDATION TO BE ABANDONED.
- RS — REMOVE AND SALVAGE EQUIPMENT.
- EXISTING SERIES LIGHTING CONDUIT TO BE ABANDONED & REMOVE CONDUCTORS UNLESS OTHERWISE NOTED
- PROPOSED MULTIPLE LIGHTING POLE CONDUIT (SCHEDULE 40 PVC) 2"C, 2#8, 1#8 GROUND UNLESS OTHERWISE NOTED
- PROPOSED BANNER AND TREE LIGHTING CONDUIT (SCHEDULE 40 PVC) 2"C, 2#6, 1#8GRD UNLESS OTHERWISE NOTED
- PROPOSED COMMUNICATION CONDUIT FOR FUTURE USE 4"C (SCHEDULE 40) WITH 3" MEXCELL INNERDUCT, PULL ROPE FOR FUTURE USE UNLESS OTHERWISE NOTED.

NOTES:
1. THE SIZE OF STREET LIGHT PULL BOX SHALL BE #5 (CHRISTY N30) UNLESS INDICATED OTHERWISE.
2. THE SIZE OF COMMUNICATION PULL BOX SHALL BE #6 (CHRISTY N36) UNLESS INDICATED OTHERWISE.
3. WHEN SIDEWALKS ARE PRESENT, CONDUIT SHALL BE INSTALLED UNDER SIDEWALK. PULL BOX SHALL BE INSTALLED WITHIN SIDEWALK WITH CHRISTY FIBERLYTE LIDS.
4. THE CONTRACTOR TO PROVIDE BRIDGE FROM COMMUNICATION PULL BOX TO THE NEAREST TRAFFIC SIGNAL COMMUNICATION PULL BOX AT EACH TRAFFIC SIGNAL LOCATION.

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

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811
TWO WORKING DAYS BEFORE YOU DIG

WARNING:
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0 20 40 80
SCALE: 1"=40'

ITERIS
1700 Carnegie Avenue, Suite 100
Santa Ana, CA 92705-5551
Phone:(949) 270-9480
Fax:(949) 270-9481

REGISTERED PROFESSIONAL ENGINEER PAUL FRISLIE No. 72982 CIVIL STATE OF CALIFORNIA

04/08/2016
PAUL M. FRISLIE PE 72982 DATE

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION
WILSHIRE BLVD TO CAMDEN DR
STREET LIGHTING PLAN
COMMUNICATION PLAN

SCALE AS SHOWN

F.B. NO.	PAGE	TO	
DESIGNED	NK	DATE	04/08/2016
DRAWN	SC	DATE	04/08/2016
CHECKED	BL	DATE	04/08/2016

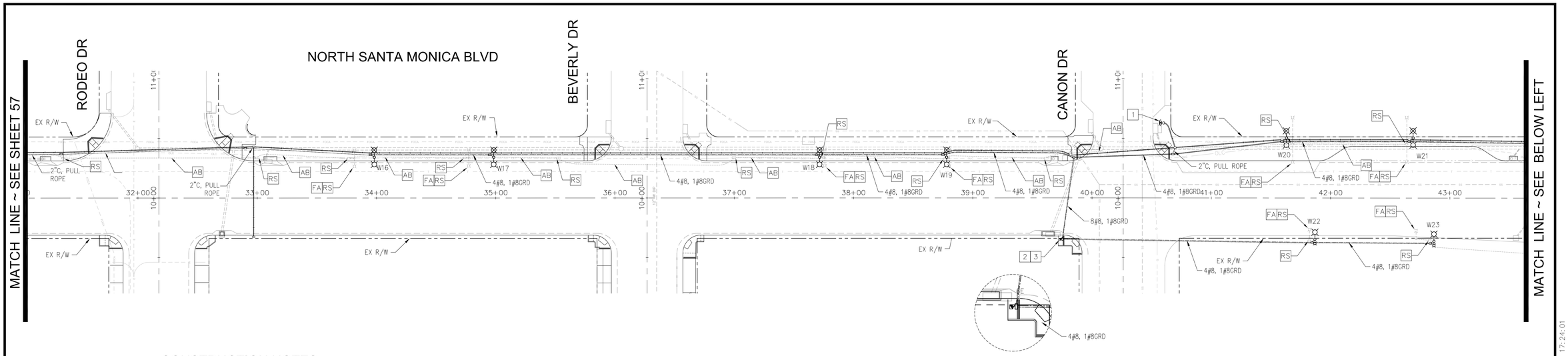
DATE	REVISION	BY
05/27/16	2 ADDENDUM NO. 2	NK

SUBMITTED DATE
APPROVED DATE 05/27/2016

JOB NO. 2184
DRAWING NO. 7449
SHEET 57 OF 85 SHEET

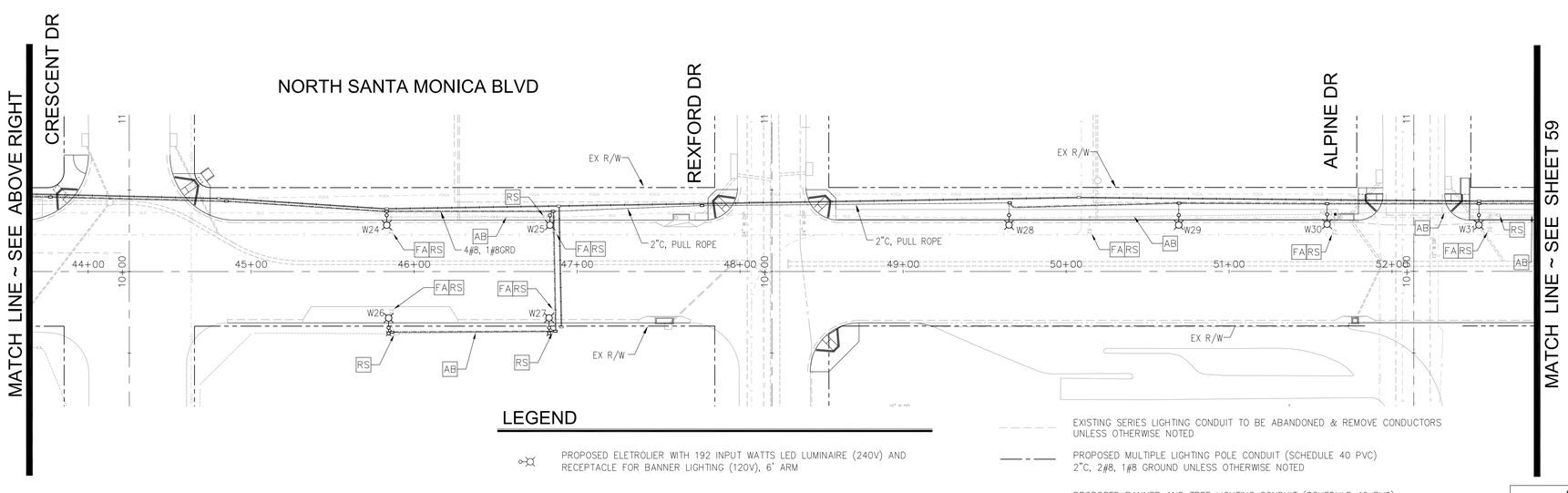
CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT

DWG Name: J:\USERS\16\Jobs\J16-17XX Beverly Hills NSMB PS&E (J13-1771)\Cad\PLANS\100% Plans\J13-1771 - NSMB SL.dwg Plotted by: nkim on May 27, 2016 - 17:23:56



CONSTRUCTION NOTES

1. FURNISH AND INSTALL TYPE 336S CONTROLLER CABINET ON NEW FOUNDATION. EXACT LOCATION OF CABINET SHALL BE DETERMINED BY CITY ENGINEER.
2. INSTALL 120/240V TYPE III-CF (DUAL METER) SERVICE EQUIPMENT ENCLOSURE, MYERS MEUG24-M100 OR APPROVED EQUAL WITH TORK 4-CHALNNEL PROGRAMMABLE TIMER, TYPE V PEC, CONTRACTOR (DP), TESTSWITCH AND 2-40 AMP (2-POLE) LIGHTING BREAKERS, 1-40 AMP (1-POLE) BANNER LIGHTING BREAKERS AND 1-40 AMP (1-POLE) TREE LIGHTING BREAKERS. LIGHTING CIRCUITS SHALL BE 240V METERED AND BANNER AND TREE LIGHTING CIRCUITS SHALL BE 120V ON A SEPARATE METER.
3. PRELIMINARY SERVICE POINT LOCATION FROM SOUTH SANTA MONICA UNDERGROUND VAULT. AT MINIMUM FOUR (4) WEEKS IN ADVANCE NOTICE SHALL BE GIVEN TO SOUTHERN CALIFORNIA EDISON BY CONTACTING THOMAS YOLAS AT (310)315-3258. FINAL SERVICE LOCATION AND EXACT CONDUIT LOCATION SHALL BE DETERMINED BY SCE IN THE FIELD.



LEGEND

- PROPOSED ELETROLIER WITH 192 INPUT WATTS LED LUMINAIRE (240V) AND RECEPTACLE FOR BANNER LIGHTING (120V), 6' ARM
- PROPOSED ELETROLIER WITH 44/192 INPUT WATTS LED LUMINAIRE (240V) AND RECEPTACLE FOR BANNER LIGHTING (120V), 2' & 6' ARMS
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- FA — FOUNDATION TO BE ABANDONED.
- RS — REMOVE AND SALVAGE EQUIPMENT.
- EXISTING SERIES LIGHTING CONDUIT TO BE ABANDONED & REMOVE CONDUCTORS UNLESS OTHERWISE NOTED
- PROPOSED MULTIPLE LIGHTING POLE CONDUIT (SCHEDULE 40 PVC) 2"C, 2#8, 1#8 GROUND UNLESS OTHERWISE NOTED
- PROPOSED BANNER AND TREE LIGHTING CONDUIT (SCHEDULE 40 PVC) 2"C, 2#6, 1#8GRD UNLESS OTHERWISE NOTED
- PROPOSED COMMUNICATION CONDUIT FOR FUTURE USE 4"C, PULL ROPE FOR FUTURE USE UNLESS OTHERWISE NOTED.

NOTES:
1. THE SIZE OF STREET LIGHT PULL BOX SHALL BE #5 (CHRISTY N30) UNLESS INDICATED OTHERWISE.
2. THE SIZE OF COMMUNICATION PULL BOX SHALL BE #6 (CHRISTY N36) UNLESS INDICATED OTHERWISE.
3. WHEN SIDEWALKS ARE PRESENT, CONDUIT SHALL BE INSTALLED UNDER SIDEWALK. PULL BOX SHALL BE INSTALLED WITHIN SIDEWALK WITH CHRISTY FIBERLYTE LIDS.
4. THE CONTRACTOR TO PROVIDE BRIDGE FROM COMMUNICATION PULL BOX TO THE NEAREST TRAFFIC SIGNAL COMMUNICATION PULL BOX AT EACH TRAFFIC SIGNAL LOCATION.

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

Underground Service Alert
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TWO WORKING DAYS BEFORE YOU DIG

WARNING:
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0 20 40 80
SCALE: 1"=40'

REGISTERED PROFESSIONAL ENGINEER PAUL FRISLIE No. 72982 CIVIL STATE OF CALIFORNIA

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1700 Carnegie Avenue, Suite 100
Santa Ana, CA 92705-5551
Phone:(949) 270-9480
Fax:(949) 270-9481

04/08/2016
PAUL M. FRISLIE PE 72982 DATE

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION
RODEO DR TO ALPINE DR
STREET LIGHTING PLAN
COMMUNICATION PLAN

SCALE AS SHOWN			
F.B. NO.	PAGE	TO	
DESIGNED	NK	DATE	04/08/2016
DRAWN	SC	DATE	04/08/2016
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05/27/16	2	ADDENDUM NO. 2	NK

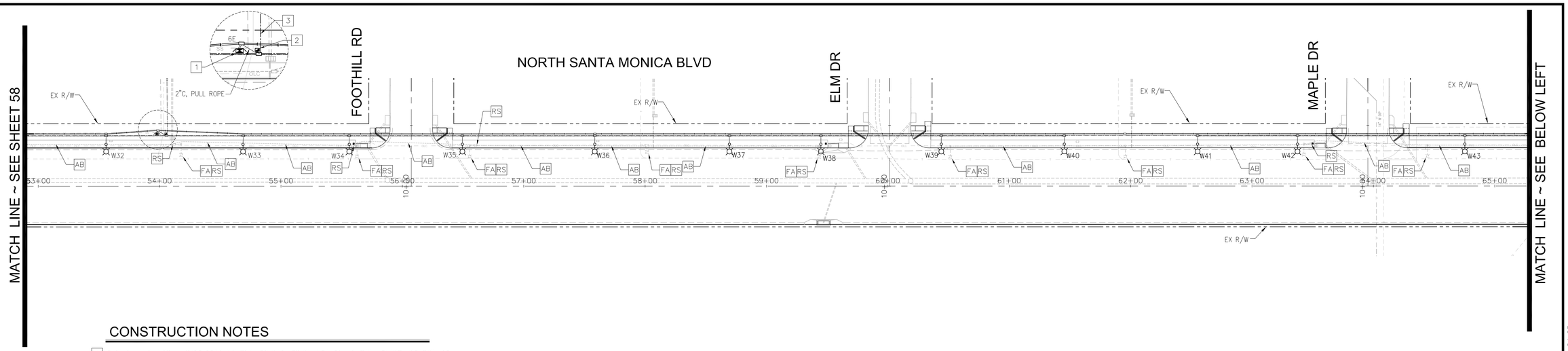
DATE	REVISION	BY

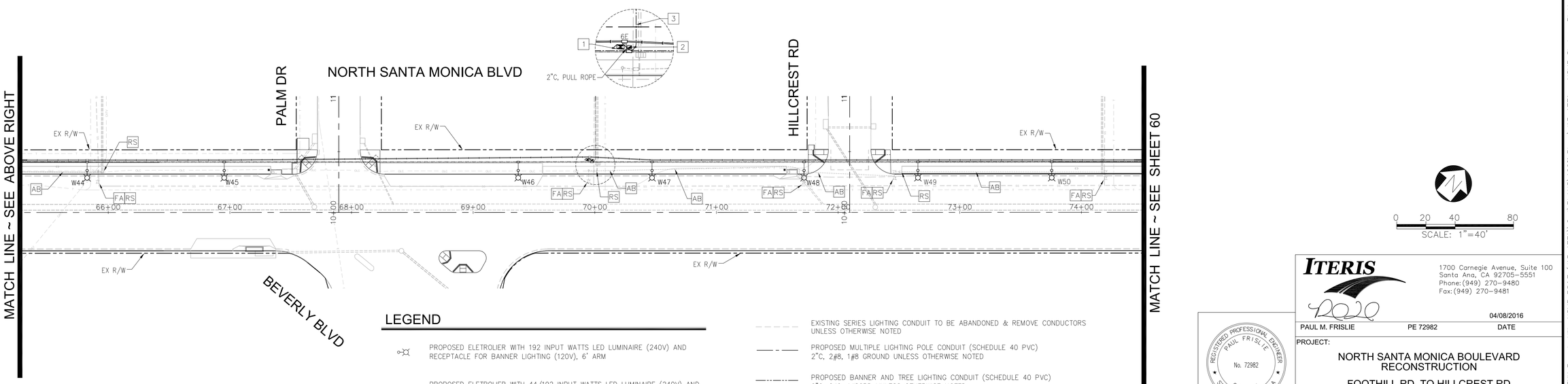
SUBMITTED DATE
APPROVED DATE 05/27/2016

JOB NO. 2184
DRAWING NO. 7449
SHEET 58 OF 85 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT

DWG Name: J:\USERS\16\Jobs\J16-177XX Beverly Hills NSMB PS&E (J13-1771)\Cad\PLANS\100% Plans\J13-1771 - NSMB SL.dwg Plotted by: nkim on May 27, 2016 - 17:24:01





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Fax:(949) 270-9481

REGISTERED PROFESSIONAL ENGINEER PAUL FRISLIE No. 72982 CIVIL STATE OF CALIFORNIA

PAUL M. FRISLIE PE 72982 04/08/2016 DATE

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION
FOOTHILL RD TO HILLCREST RD
STREET LIGHTING PLAN
COMMUNICATION PLAN

SCALE AS SHOWN

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APPROVED ____ DATE 05/27/2016

JOB NO. 2184
DRAWING NO. 7449
SHEET 59 OF 85 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT

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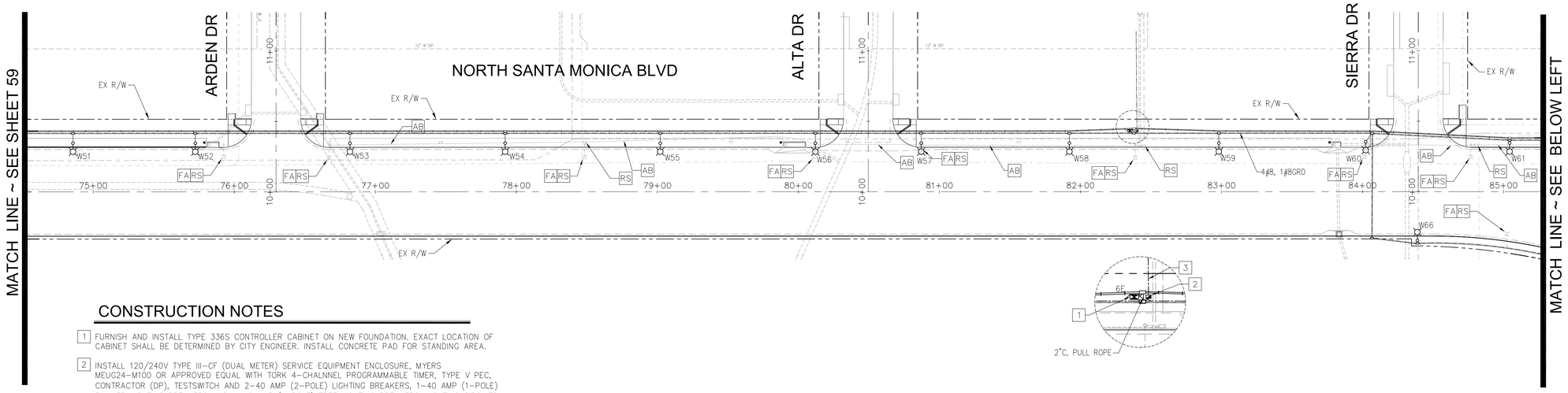

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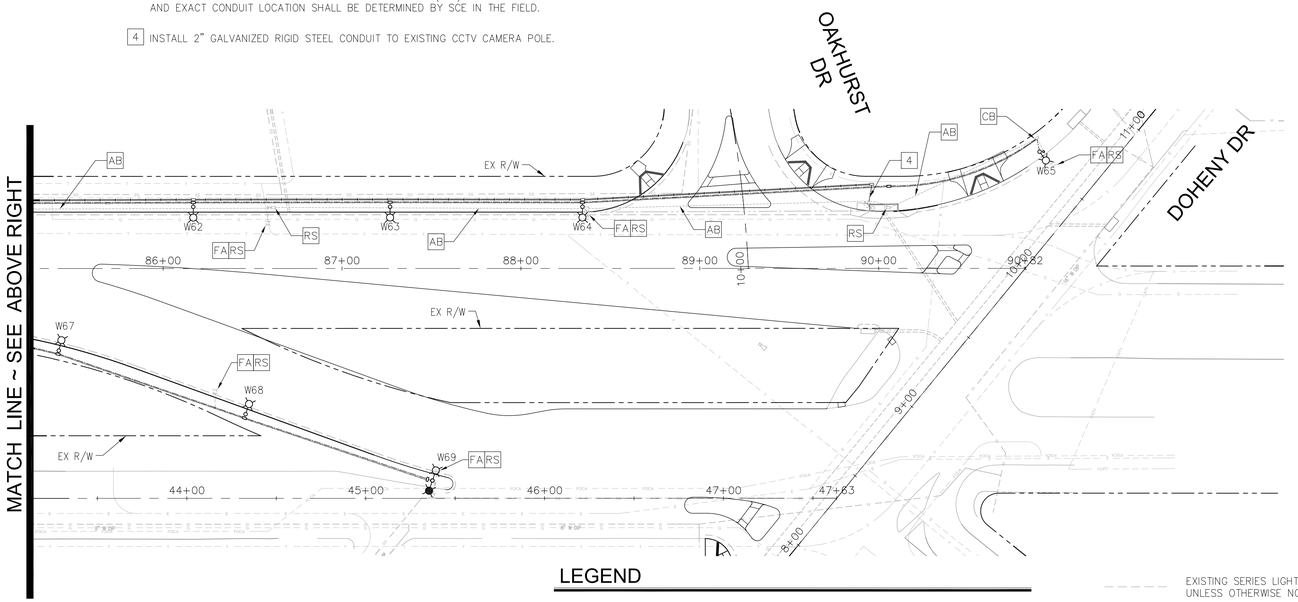

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REGISTERED PROFESSIONAL ENGINEER
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ITERIS
1700 Carnegie Avenue, Suite 100
Santa Ana, CA 92705-5551
Phone: (949) 270-9480
Fax: (949) 270-9481

04/08/2016
PAUL M. FRISLIE PE 72982 DATE

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION
ARDEN DR TO DOHENY DR
STREET LIGHTING PLAN
COMMUNICATION PLAN

SUBMITTED DATE
APPROVED DATE 05/27/2016

JOB NO. 2184
DRAWING NO. 7449
SHEET 60 OF 85 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT

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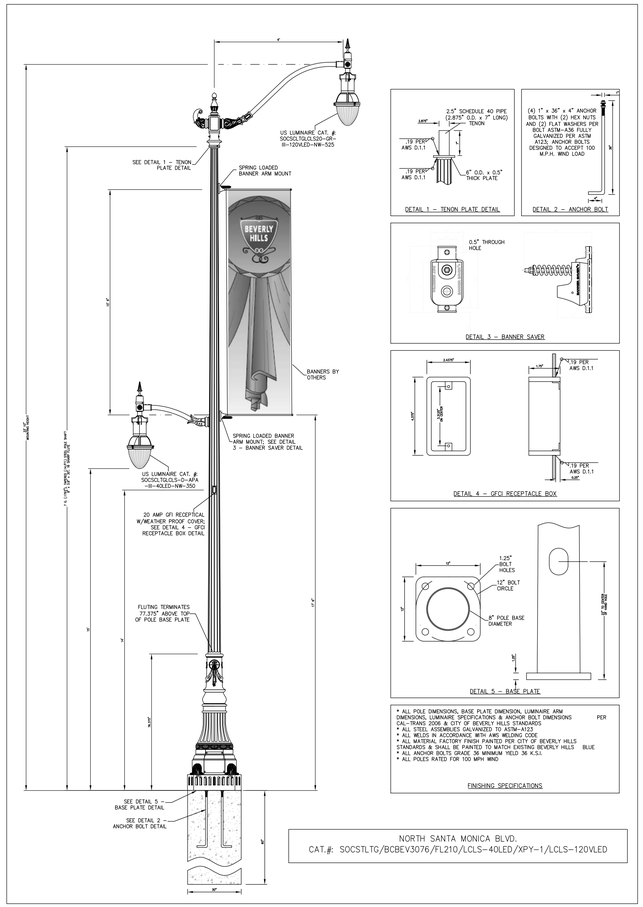

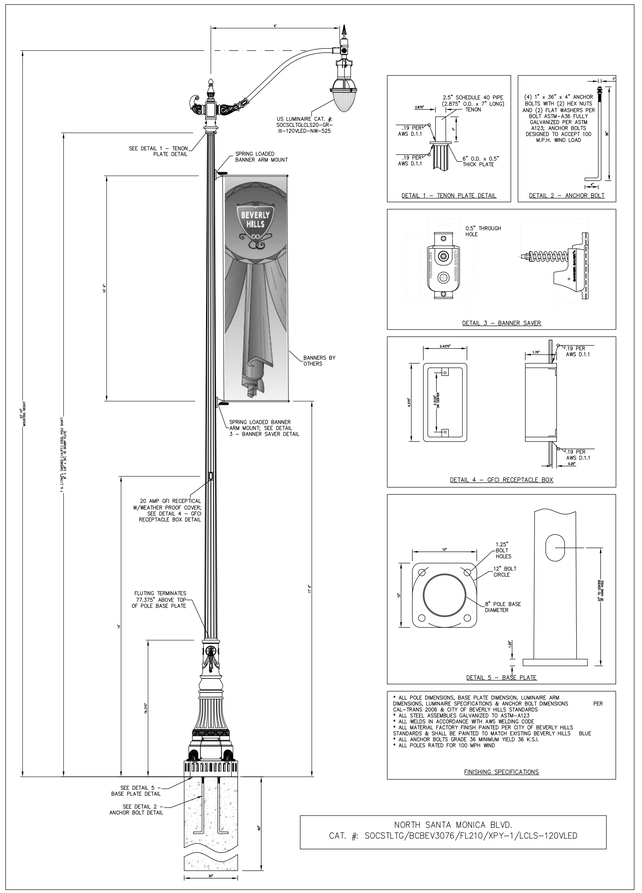

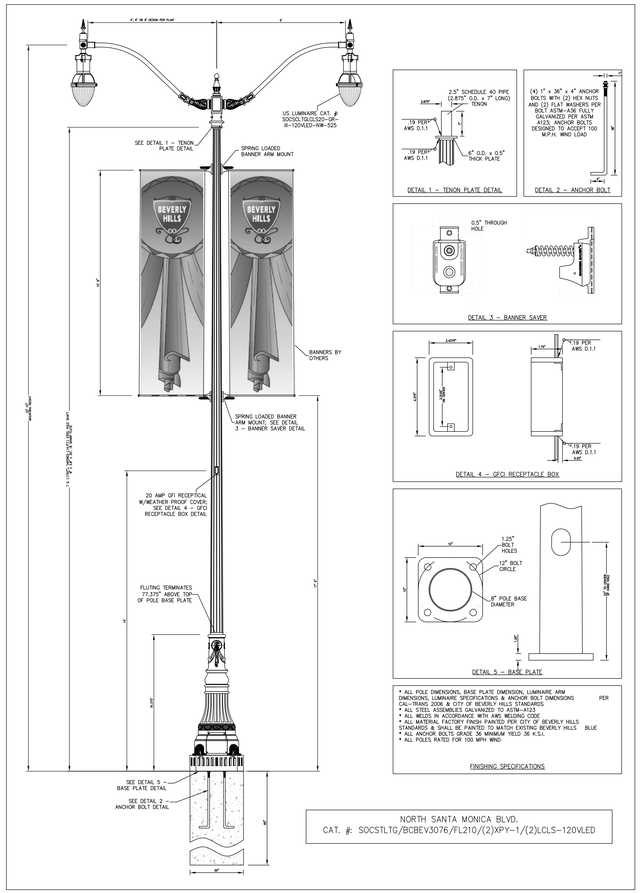

GENERAL NOTES

1. ALL WORK RELATED TO ELECTRIC SERVICE SHALL BE PERFORMED IN CONFORMANCE WITH THE REQUIREMENTS OF THE SOUTHERN CALIFORNIA EDISON COMPANY.
2. THE CONTRACTOR SHALL POSSESS A CLASS "A" OR A CLASS "C–10" LICENSE AT THE TIME THIS CONTRACT IS AWARDED.
3. UTILITY LINE LOCATIONS WERE TAKEN FROM THE RECORD AND WERE NOT LOCATED IN THE FIELD, UNLESS OTHERWISE NOTED IN THE PLAN.
4. STATE LAW (SB3019) REQUIRES THE CONTRACTOR TO CONTACT UNDERGROUND SERVICE ALERT AND OBTAIN AN IDENTIFICATION NUMBER PRIOR TO THE ISSUANCE OF AN ENCROACHMENT PERMIT FROM THE CITY OF BEVERLY HILLS. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT 811, 48 HOURS MINIMUM IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES THAT MAY AFFECT ANY UNDERGROUND UTILITIES.
5. IN CASE OF ACCIDENTS INVOLVING SAFETY MATTERS COVERED BY SECTION 6409.1B OF THE CALIFORNIA LABOR CODE, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE STATE DIVISION OF INDUSTRIAL SAFETY.
6. AT THE DIRECTION OF RESIDENT ENGINEER, THE CONTRACTOR SHALL DELIVER AND UNLOAD ANY SALVAGE AT THE LOCATIONS AS DIRECTED BY RESIDENT ENGINEER.
7. ALL CABLE SHALL BE DELIVERED NEW TO THE SITE AND SHALL BE PULLED CONTINUOUSLY FROM LIGHT STANDARD TO FEED POINT, SPLICES ARE ALLOWED IN PULL BOXES ONLY. NO WIRES ARE ALLOWED IN CONDUIT OR STREET LIGHT STANDARD.
8. CONDUCTORS SHALL BE SPLICED BY THE USE OF COMPRESSION CONNECTORS, AND INSULATION SHALL BE BY "METHOD B". ALL SPLICES SHALL BE SOLDERED. WIRE NUTS ARE NOT ALLOWED. SEE CALTRANS STANDARD PLANS, ES–13B.
9. WIRING SHALL BE POLY VINYL–CHLORIDE INSULATED (TYPE THW OR THNN) 600 V – MINIMUM NO.8 AWG COPPER CABLE PER STANDARD SPECIFICATIONS OR APPROVED EQUAL.
10. CONDUCTORS SHALL CONFORM TO THE FOLLOWING COLORS: CONDUCTORS FOR GROUNDING AND BONDING SHALL BE EITHER BARE OR GREEN: COMMON OR NEUTRAL CONDUCTORS SHALL BE WHITE: UNGROUNDED LINE–1 CONDUCTORS SHALL BE BLACK: UNGROUNDED LINE–2 CONDUCTORS SHALL BE RED.
11. STATE LAW CAL/OSHA ELECTRICAL SAFETY ORDER 2946 REQUIRES A MINIMUM CLEARANCE OF 10 FEET FROM OVER HEAD HIGH VOLTAGE LINES AND STREET LIGHTS AND OPERATING BOOM–TYPE LIFTING OR HOISTING EQUIPMENT.
12. CONTRACTOR SHALL REQUEST THE RESIDENT ENGINEER TO NOTIFY THE TRAFFIC ENGINEERING DEPARTMENT TO SEND LETTER OF SERVICE REQUEST TO EDISON TAT THE START OF CONSTRUCTION OF THE PROJECT.
13. LUMINAIRE SHALL OPERATE ON 240 VOLTS.
14. POLES SHALL BE MOUNTED IN CENTER OF FOUNDATION PER SPECIAL PROVISIONS.
15. ALL FOUNDATIONS SHALL BE INSTALLED AS SHOWN ON THE PLANS OR APPROVED BY RESIDENT ENGINEER.
16. CONTRACTOR SHALL SUPPLY AND INSTALL ALL MATERIALS, INCLUDING PHOTOELECTRIC CONTROL, CIRCUIT BREAKERS AND AUXILIARY RELAY(S). SOUTHERN CALIFORNIA EDISON WILL FURNISH AND INSTALL SERVICE CONDUCTORS TO THE LANDING LUGS.
17. ALL CONDUIT SHALL BE RIGID METALLIC CONDUIT OR SCHEDULE 80 PVC UNLESS OTHERWISE NOTED.
18. BONDING OF CIRCUITS SHALL BE PER APPLICABLE CODES.
19. POLES SHALL BE FROM ONE MANUFACTURER.
20. CONTRACTOR SHALL MAINTAIN THE EXISTING STREET LIGHTING SYSTEM OPERATIONAL AT ALL TIMES.

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PAUL M. FRISLIE	PE 72982	04/08/2016 DATE

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION
GENERAL NOTES AND DETAILS
STREET LIGHTING PLAN

SUBMITTED ____ DATE ____
APPROVED ____ DATE 05/27/2016

JOB NO. 2184
DRAWING NO. 7449
SHEET 61 OF 85 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
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IRRIGATION NOTES

1. THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, ETC. SHOWN WITHIN PAVED AREAS ARE FOR DESIGN CLARIFICATION ONLY. INSTALL ALL COMPONENTS IN PLANTING AREAS WHEREVER POSSIBLE.

2. SET ALL VALVES AND QUICK COUPLERS NEXT TO WALKS OR PAVED SURFACES. IN LOCATIONS WITH NO ADJACENT PAVING, COORDINATE FINAL LOCATION WITH OWNER.

3.NO SUBSTITUTIONS OF SMALLER PIPE SIZES SHALL BE PERMITTED, BUT SUBSTITUTIONS OF LARGER SIZES MAY BE APPROVED.

4. ALL DAMAGED AND REJECTED PIPE SHALL BE REMOVED FROM THE SITE AT THE TIME OF THE SAID REJECTION.

5. BATTERY CONTROLLER LOCATION SHOWN IS DIAGRAMMATIC. CONNECT CONTROLLER TO ACTUATOR IN VALVE BOX.

6. BEFORE COMMENCING ANY WORK, OBTAIN AN UNDERGROUND SERVICE ALERT I.D. NUMBER BY CALLING 1-800-422-4133. ALLOW TWO (2) WORKING DAYS AFTER THE I.D. NUMBER IS OBTAINED AND BEFORE THE EXCAVATION WORK IS STARTED SO THAT UTILITY OWNERS CAN BE NOTIFIED.

7. FLUSH AND ADJUST ALL SPRINKLER HEADS AND VALVES FOR OPTIMUM COVERAGE WITH MINIMAL OVER SPRAY ONTO WALKS, STREETS, ETC.

8. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO BE FAMILIAR WITH THE EXISTING SITE CONDITIONS, UTILITIES, GRADE DIFFERENCES, LOCATION OF WALLS, ETC. THE IRRIGATION CONTRACTOR SHALL REPAIR OR REPLACE ALL ITEMS DAMAGED BY HIS WORK. HE SHALL COORDINATE HIS WORK WITH OTHER CONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE SLEEVES AND LATERALS UNDER ROADWAYS AND PAVING, ETC.

9. THE SPRINKLER SYSTEM DESIGN IS BASED ON A MINIMUM OPERATING PRESSURE OF 24.87 P.S.I. AND A MAXIMUM FLOW DEMAND OF 22.61 G.P.M. THE CONTRACTOR SHALL VERIFY WATER PRESSURES PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCE BETWEEN WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE ARCHITECT.

10. DO NOT WILLFULLY INSTALL THE SPRINKLER SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT THERE ARE UNKNOWN OBSTRUCTIONS OR GRADE DIFFERENCES IN THE AREA. DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. IN THE EVENT THAT THIS NOTIFICATION IS NOT GIVEN, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY NECESSARY REVISIONS.

11. ALL SPRINKLER EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.

12. THE INTENT OF THE DESIGN IS TO PROVIDE 100% COVERAGE TO ALL PLANTING AREAS. AS PART OF THE SCOPE OF WORK, THE CONTRACTOR WILL PROVIDE ANY ADDITIONAL HEADS, SPECIAL NOZZLES, OR PATTERNS TO ACHIEVE PROPER COVERAGE WITH A MINIMUM OF OVER SPRAY AT NO ADDITIONAL COST TO THE OWNER.

13. PROVIDE SLEEVES AS SHOWN ON DRAWING. USE 2 TIMES DIAMETER MIN. (AND NOT LESS THAN 2") SCH. 80 P.V.C. MIN. DEPTH 24" TO TOP OF LINE.

14. GUARANTEE: THE INSTALLED SPRINKLER SYSTEM SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF ACCEPTANCE OF THE WORK. SHOULD ANY TROUBLE DEVELOP WITHIN THE TIME SPECIFIED DUE TO INFERIOR OR FAULTY MATERIAL OR WORKMANSHIP, THE TROUBLE SHALL BE CORRECTED BY THE CONTRACTOR WITHOUT EXPENSE TO THE OWNER.

15. ALL POINTS OF CONNECTION ARE TO EXISTING MAINLINE. CONFIRM LOCATION IN FIELD PRIOR TO ANY TRENCHING. CONTRACTOR RESPONSIBLE FOR REPAIRING ANY CUT CONTROL WIRES DURING EXCAVATION.

16. REFER TO GENERAL NOTES FOR ADDITIONAL INFORMATION REGARDING THIS SECTION OF WORK.

NOTE

1. EXISTING TURF IRRIGATION HEADS TO BE MOVED NORTH ADJACENT TO NEW MOW CURB. CONTRACTOR SHALL ADJUST HEAD RADIUS FOR PROPER HEAD TO HEAD COVERAGE TO EXISTING TURF AREAS.

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	DETAIL
F	RAIN BIRD MDCFPCAP DRIPLINE FLUSH VALVE PURPLE CAP IN COMPRESSION FITTING COUPLER. FOR NON-POTABLE WATER USE.	11	3/SPL-1.12
A	NETAFIM 65ARIA100 1" MALE PIPE THREAD GUARDIAN AIR/VACUUM RELIEF VENT. INSTALL IN SUBSURFACE SYSTEMS. ON SLOPING TERRAIN TO PREVENT COLLAPSING OF PIPES. UV RESISTANT. MAXIMUM PRESSURE: 150 PSI.	11	2/SPL-1.12
D	RAIN BIRD OPERIND DRIP SYSTEM OPERATION INDICATOR, STEM RISES 6" FOR CLEAR VISIBILITY WHEN DRIP SYSTEM IS CHARGED TO A MINIMUM OF 20PSI. INCLUDES 16" OF 1/4" DISTRIBUTION TUBING WITH CONNECTION FITTING PRE-INSTALLED.	11	
	AREA TO RECEIVE DRIPLINE NETAFIM TLRW-04-12 (12) TECHLINE RW LANDSCAPE DRIPLINE WITH PURPLE STRIPE FOR NON-POTABLE WATER APPLICATIONS. 0.4GPH EMITTERS AT 12.0" O.C. DRIPLINE LATERALS SPACED AT 12.0" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN. DESIGNED FOR RECLAIMED WATER USE ONLY.	28,654 S.F.	4/SPL-1.12

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	DETAIL
	BUCKNER-SUPERIOR 850-DIGB 3/4" AND 1" BRASS DRIP IRRIGATION REMOTE CONTROL VALVE. AVAILABLE IN STRAIGHT-THRU GLOBE BODY DESIGN. DESIGNED TO OPERATE EFFICIENTLY WHERE THE FOLLOWING CONDITIONS EXIST: LOW PRESSURE, LOW FLOW, AND EXCESSIVE BACK PRESSURE.	11	1/SPL-1.12
	MATCO-NORCA 770S PVC WHITE BALL VALVE FOR SCH 40 AND SCH 80 PIPE, SOLVENT SLIP ENDS WITH "T" HANDLE, SAME SIZE AS MAINLINE. 1/2" TO 4".	11	1/SPL-1.12
C	RAIN BIRD TBOS2-CM1 AND TBOS2-FTUS 1 STATION BATTERY OPERATED CONTROLLER, WITH FIELD TRANSMITTER, COMMERCIAL GRADE	11	
F	RAIN BIRD PRB-QKCHK-100-100M 1" PRESSURE REGULATING W/ 100 MESH STAINLESS STEEL SCREEN= RED 120 MESH STAINLESS STEEL SCREEN= GREEN 200 MESH STAINLESS STEEL SCREEN= WHITE	11	1/SPL-1.12
POC1	POINT OF CONNECTION 1" SURVEY PSI NOT CONFIRMED	1	
POC2	POINT OF CONNECTION 1" SURVEY PSI NOT CONFIRMED	1	
POC3	POINT OF CONNECTION 1-1/4" SURVEY PSI NOT CONFIRMED	1	
POC4	POINT OF CONNECTION 1-1/4" SURVEY PSI NOT CONFIRMED	1	
POC5	POINT OF CONNECTION 1-1/4" SURVEY PSI NOT CONFIRMED	1	
POC6	POINT OF CONNECTION 1-1/4" SURVEY PSI NOT CONFIRMED	1	
POC7	POINT OF CONNECTION 1" SURVEY PSI NOT CONFIRMED	1	
POC8	POINT OF CONNECTION 1" SURVEY PSI NOT CONFIRMED	1	
POC9	POINT OF CONNECTION 1-1/4" SURVEY PSI NOT CONFIRMED	1	
POC10	POINT OF CONNECTION 1-1/4" SURVEY PSI NOT CONFIRMED	1	
POC11	POINT OF CONNECTION 1" SURVEY PSI NOT CONFIRMED	1	
	IRRIGATION LATERAL LINE: PVC SCHEDULE 40 PVC SCHEDULE 40 IRRIGATION PIPE.	486.0 L.F.	
	IRRIGATION MAINLINE: PVC SCHEDULE 40 AND CLASS 315	65.0 L.F.	

Valve Callout
Valve Number
Valve Flow
Valve Size

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

Underground Service Alert
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TWO WORKING DAYS BEFORE YOU DIG

WARNING:
BEFORE STARTING WORK ON EXISTING SERIES STREET LIGHTING CIRCUITS, CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM THE SERVING UTILITY. CUT–OUT PLUGS MUST BE PULLED AND "MEN AT WORK" SIGNS POSTED BEFORE ANY WORK IS DONE OR CONNECTIONS MADE.

LICENSED LANDSCAPE ARCHITECT
REP. P. HUTCHINS 3887
Signature
5/30/17
Renewal Date
5/26/16
Date
STATE OF CALIFORNIA

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DESIGNED DATE
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CHECKED DATE

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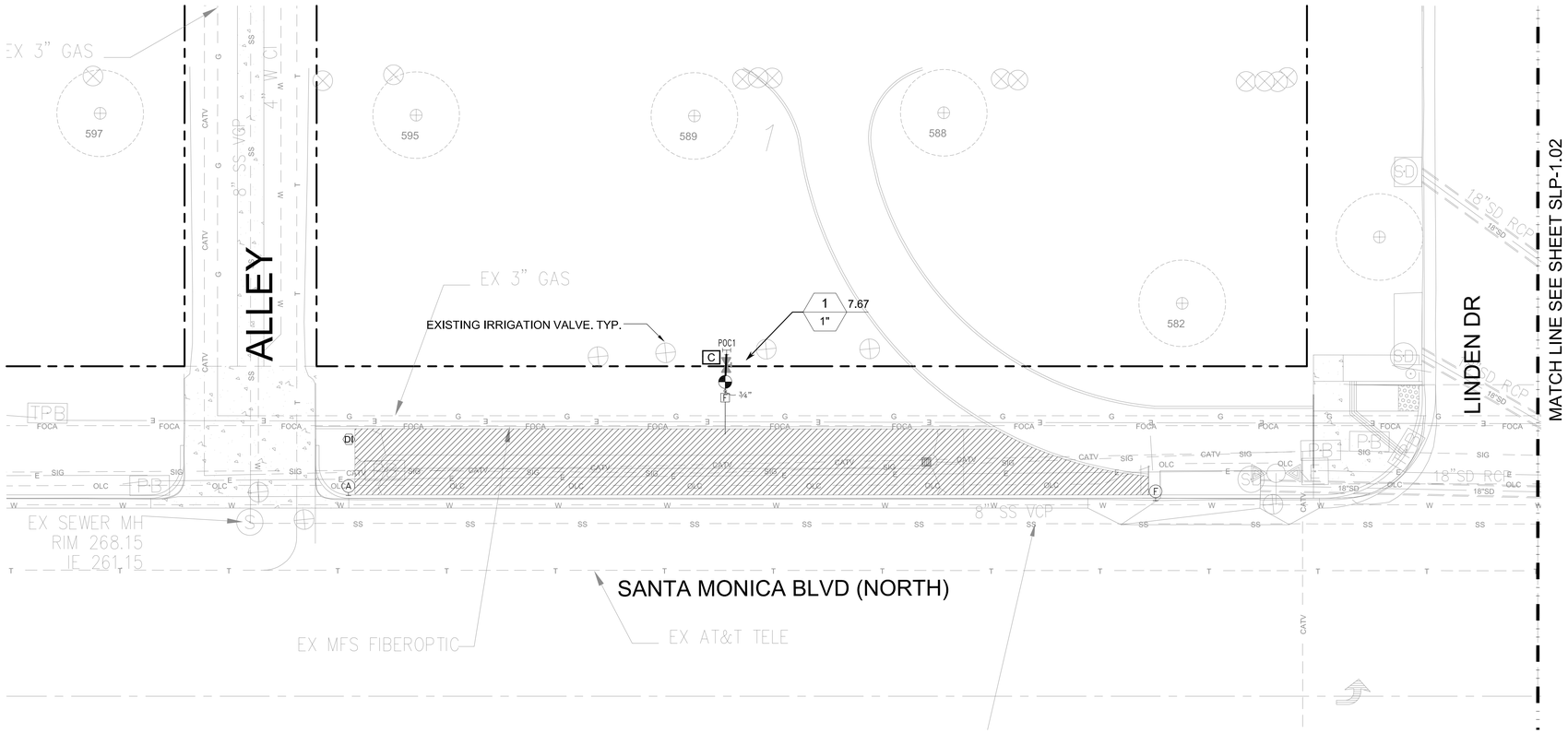
PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION
IRRIGATION NOTES & LEGENDS
SLP-1.00
WILSHIRE BOULEVARD TO DOHENY DRIVE

SUBMITTED DATE
APPROVED DATE

JOB NO. 2184
DRAWING NO. 7449
SHEET 2 OF 27 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT



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0 5' 10' 20'
1" = 10'

N

LICENSED LANDSCAPE ARCHITECT
REY P. HUTCHINS
Signature
5/30/17
Renewal Date
5/26/16
Date
STATE OF CALIFORNIA

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PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

IRRIGATION PLAN
SLP-1.01

WILSHIRE BOULEVARD TO DOHENY DRIVE

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APPROVED _____ DATE _____

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DRAWING NO. 7449
SHEET 3 OF 27 SHEET

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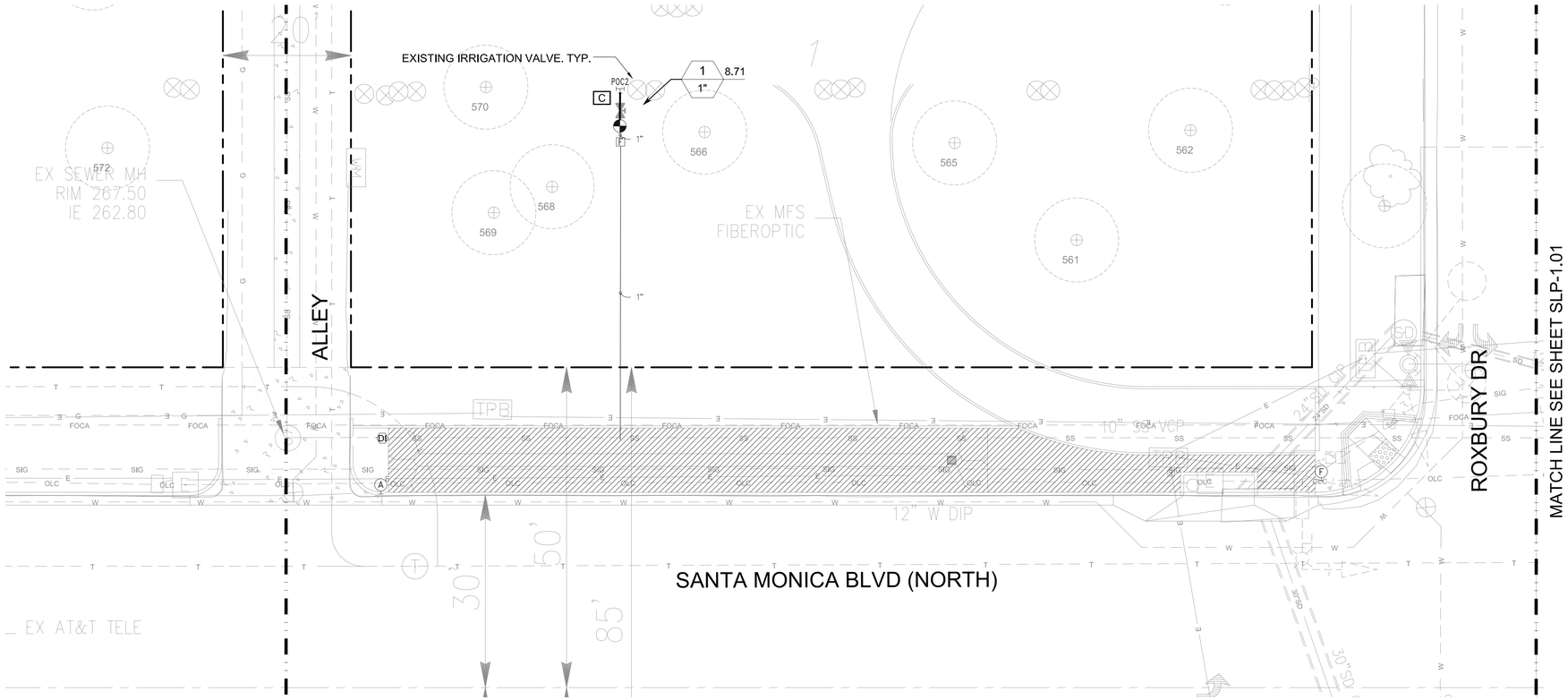

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REV. P. HUTCHINS 3385
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5/30/17
Renewal Date
5/26/16
Date
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IRRIGATION PLAN SLP-1.02

WILSHIRE BOULEVARD TO DOHENY DRIVE

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APPROVED _____ DATE _____

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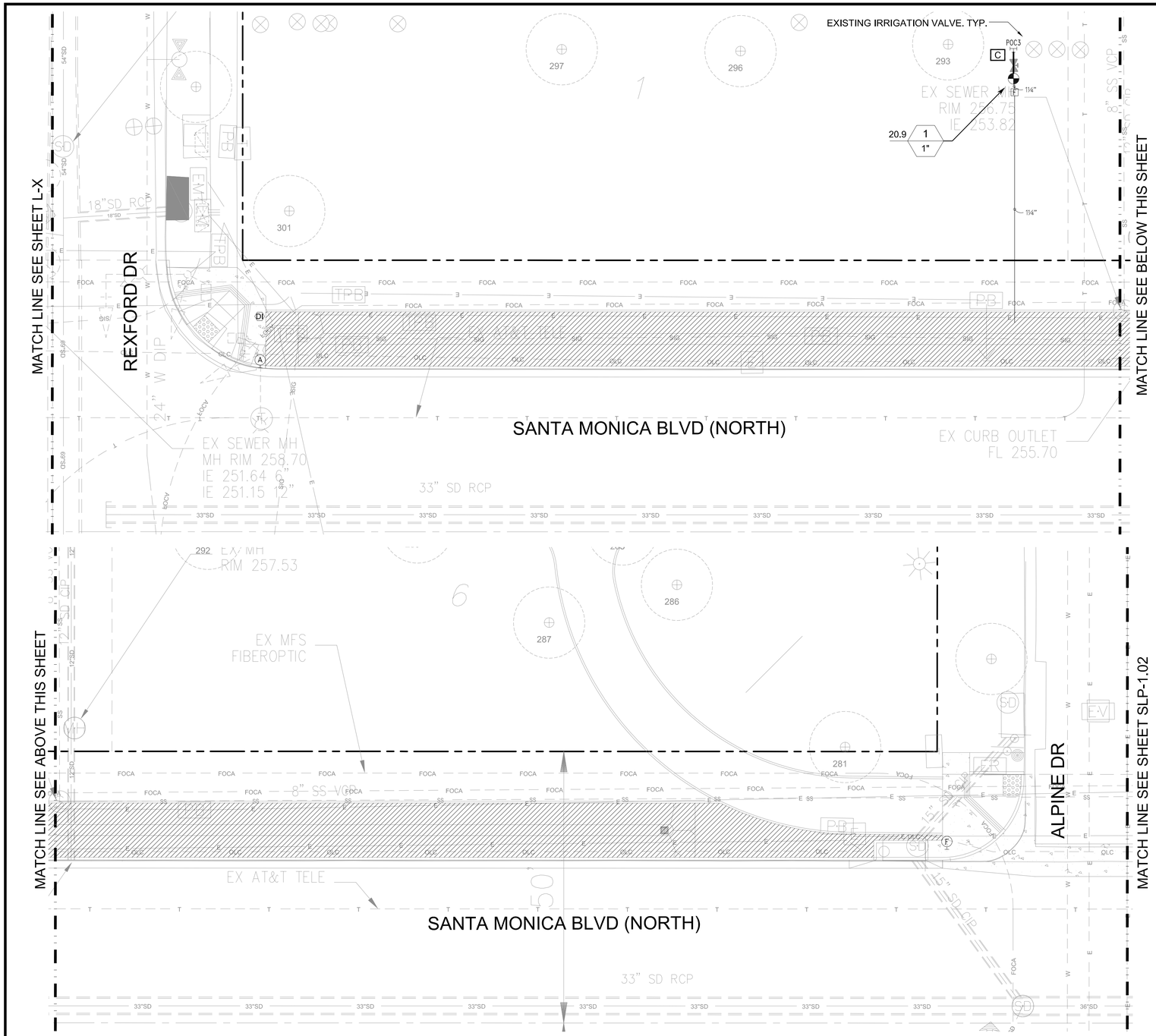
DRAWING NO. 7449
SHEET 4 OF 27 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT



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REY P. HUTCHINS 3997
Signature
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Renewal Date
5/26/16
Date
STATE OF CALIFORNIA

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IRRIGATION PLAN
SLP-1.03
WILSHIRE BOULEVARD TO DOHENY DRIVE

SUBMITTED _____ DATE _____
APPROVED _____ DATE _____

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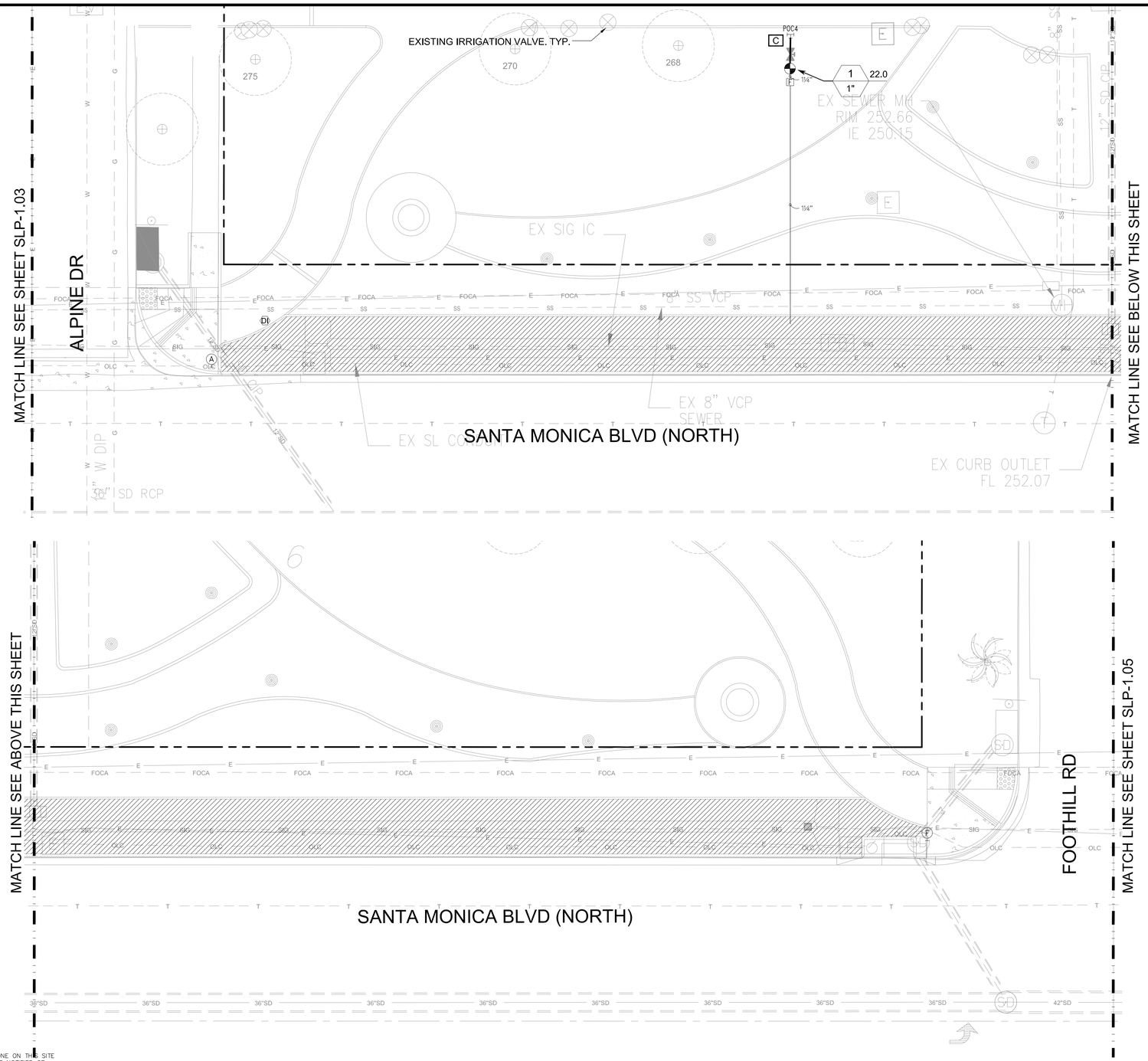

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LICENSED LANDSCAPE ARCHITECT
REBY P. HUTCHINGS
Signature
9/30/17
Renewal Date
5/26/16
Date
STATE OF CALIFORNIA

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IRRIGATION PLAN
SLP-1.04

WILSHIRE BOULEVARD TO DOHENY DRIVE

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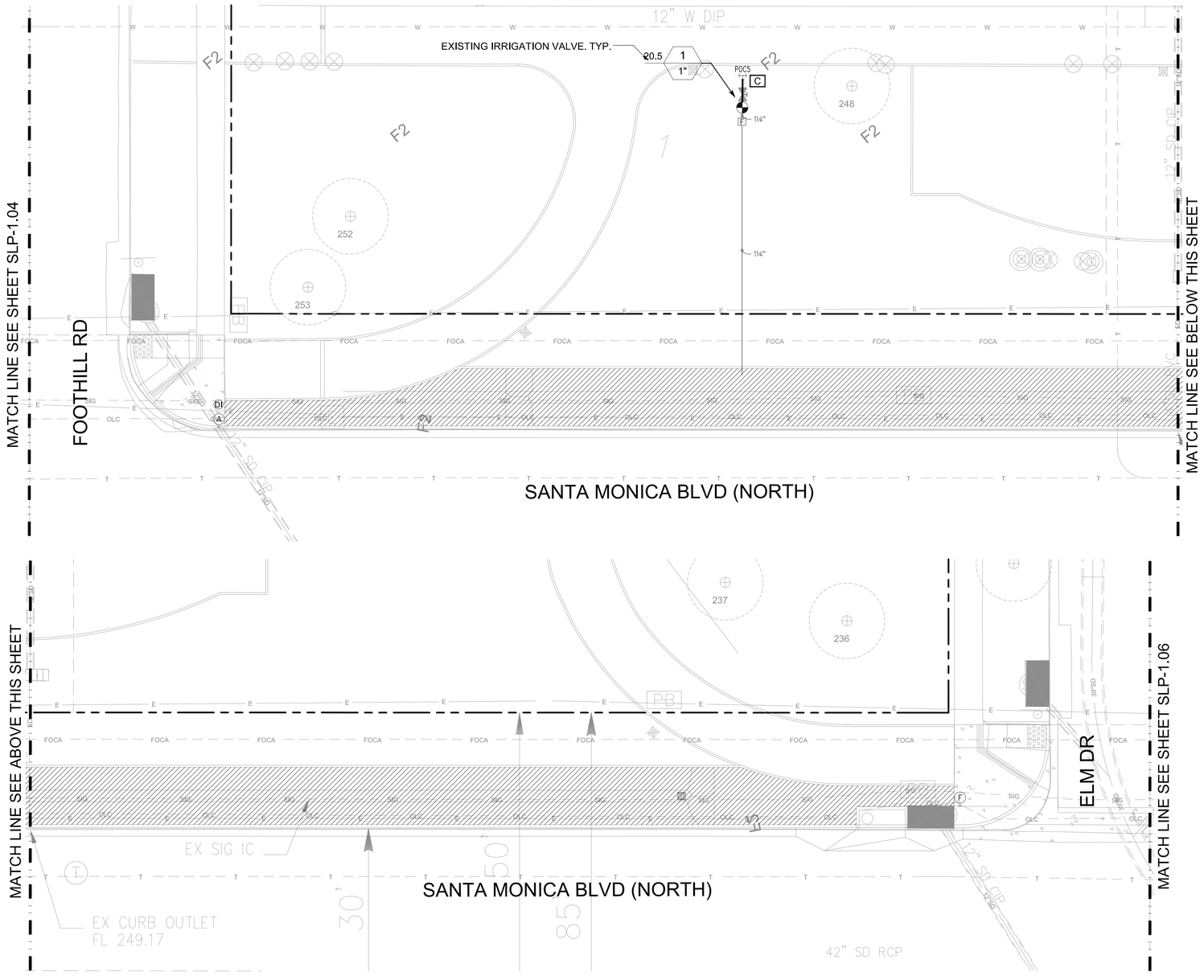

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LICENSED LANDSCAPE ARCHITECT
JEFFREY P. HUTCHINS 4385
Signature
5/30/12
Renewal Date
5/26/16
Date
STATE OF CALIFORNIA

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IRRIGATION PLAN
SLP-1.05

WILSHIRE BOULEVARD TO DOHENY DRIVE

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DRAWING NO. 7449
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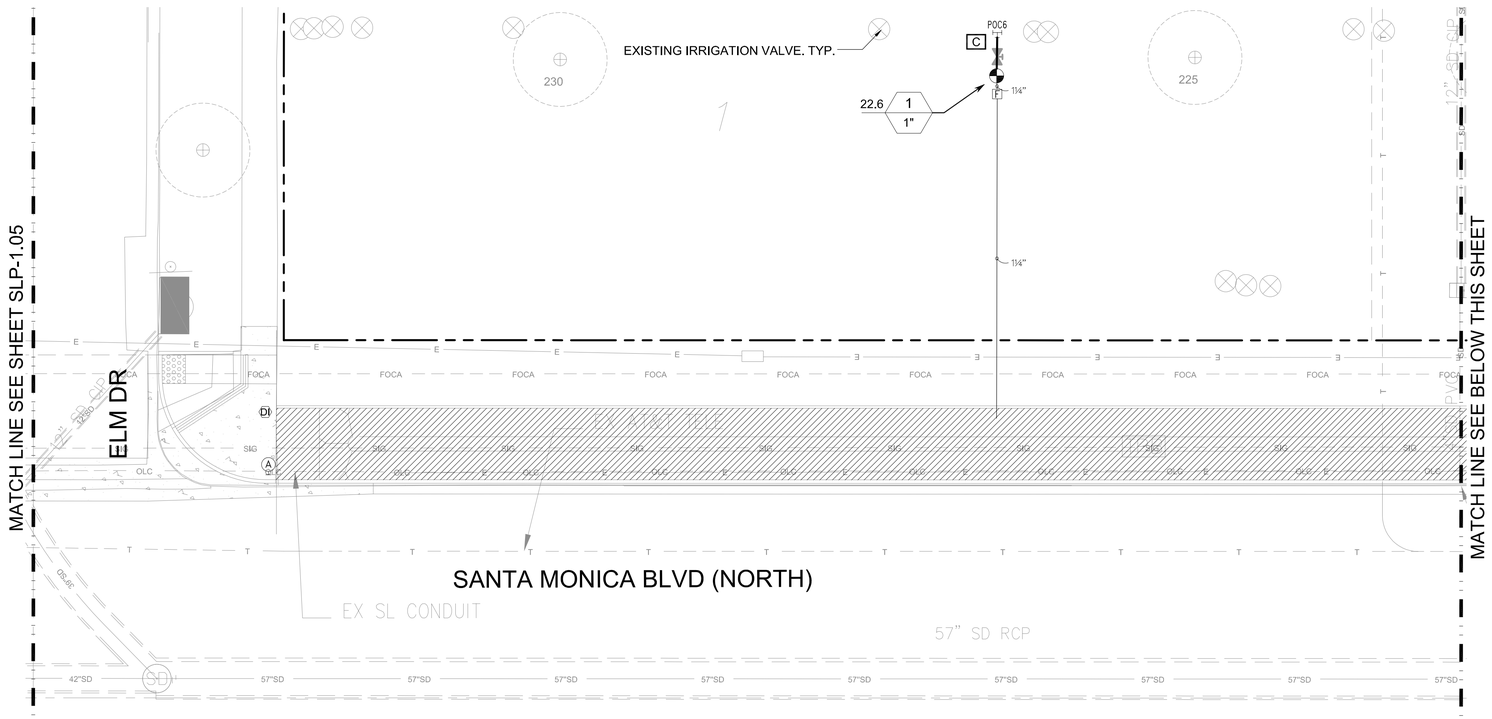

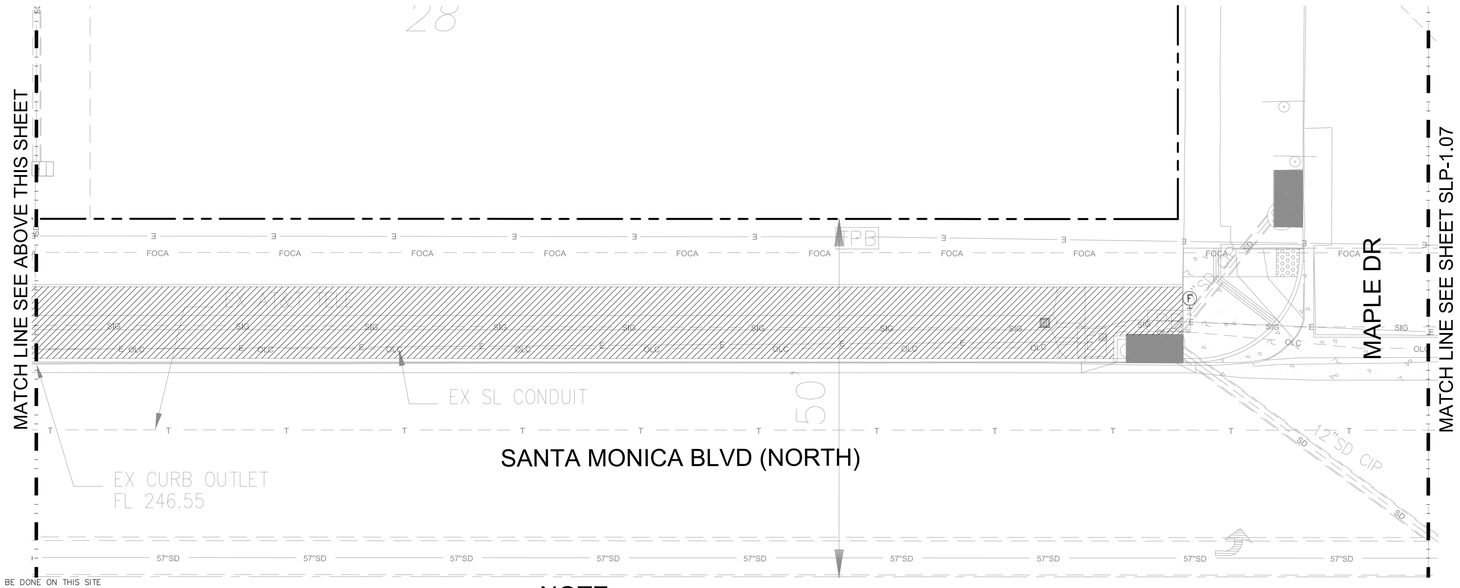

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N

LICENSED LANDSCAPE ARCHITECT
LEHRER P. HUTCHINS 4887
Signature
5/30/12
Renewal Date
5/26/16
Date
STATE OF CALIFORNIA

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NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

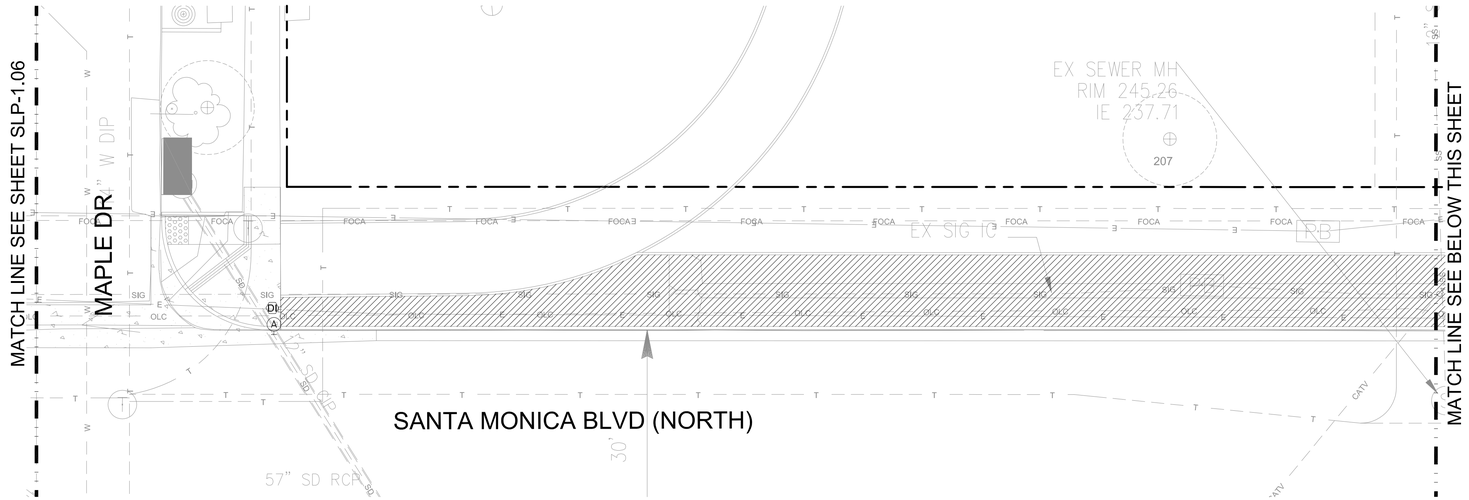
IRRIGATION PLAN SLP-1.06

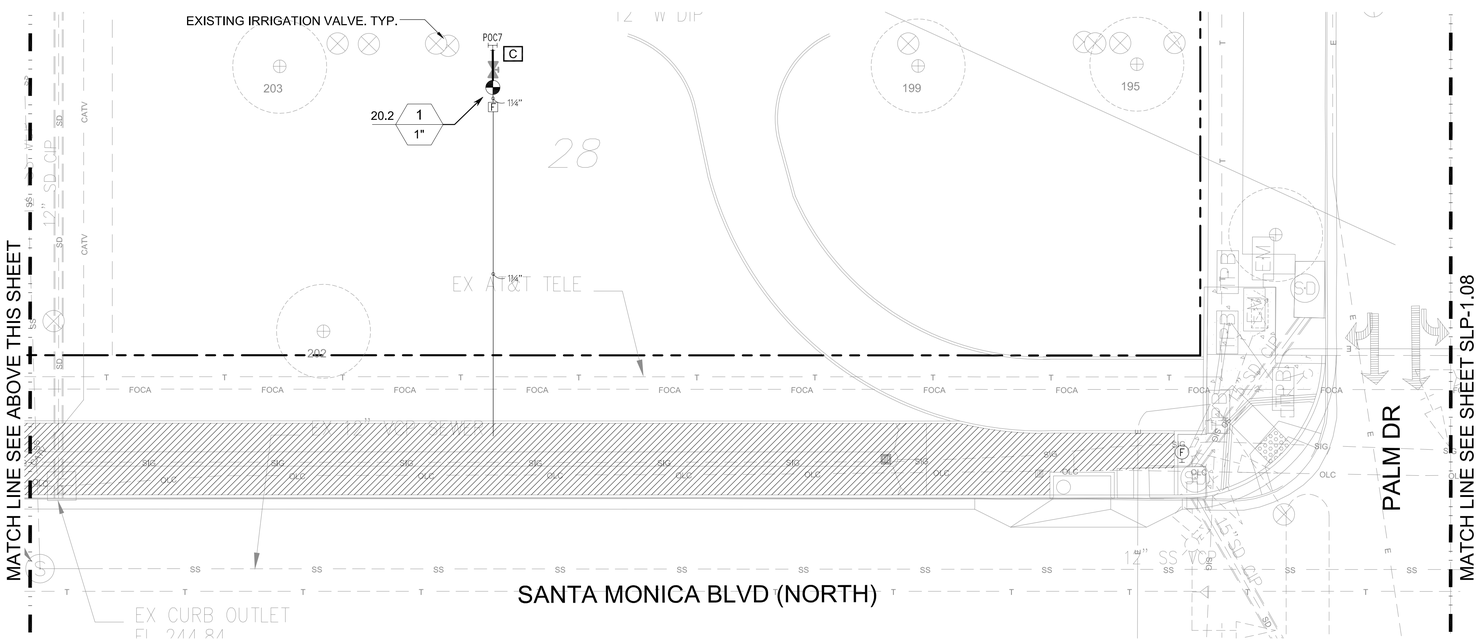
WILSHIRE BOULEVARD TO DOHENY DRIVE

SUBMITTED _____ DATE _____
APPROVED _____ DATE _____

JOB NO. 2184
DRAWING NO. 7449
SHEET 8 OF 27 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT





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REP. P. HUTCHINS 3867
Signature
5/30/17
Renewal Date
5/26/16
Date
STATE OF CALIFORNIA

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PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

IRRIGATION PLAN
SLP-1.07

WILSHIRE BOULEVARD TO DOHENY DRIVE

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DRAWING NO. 7449
SHEET 9 OF 27 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
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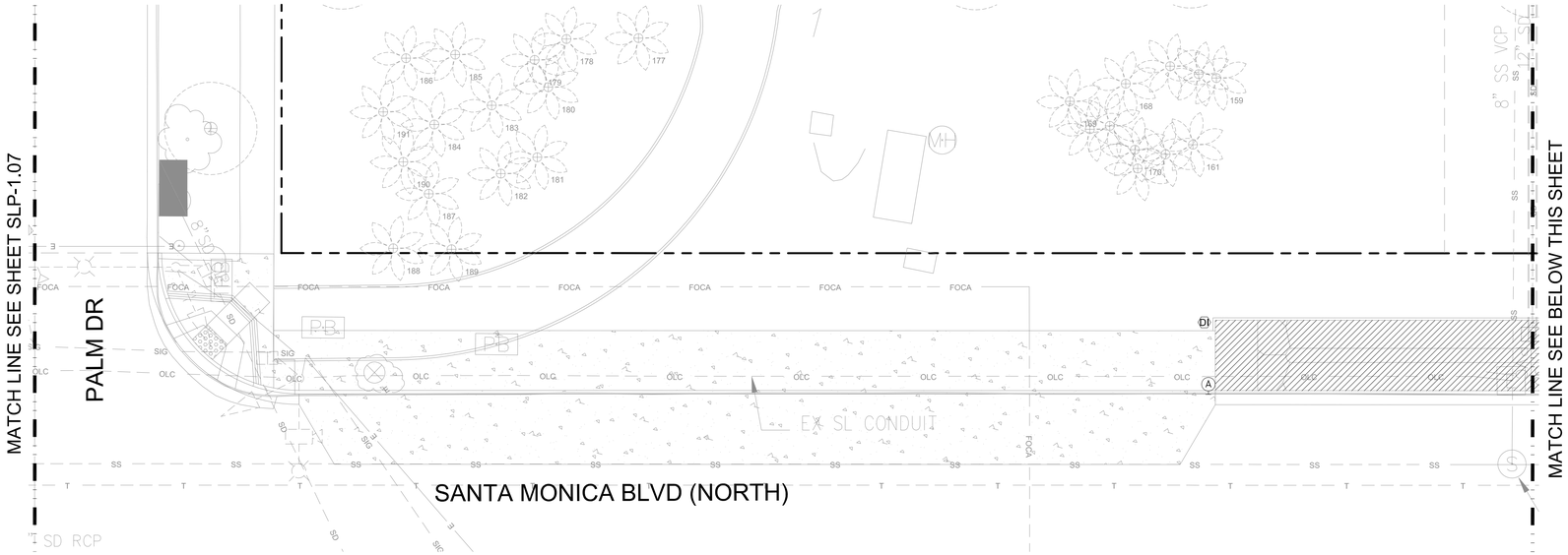

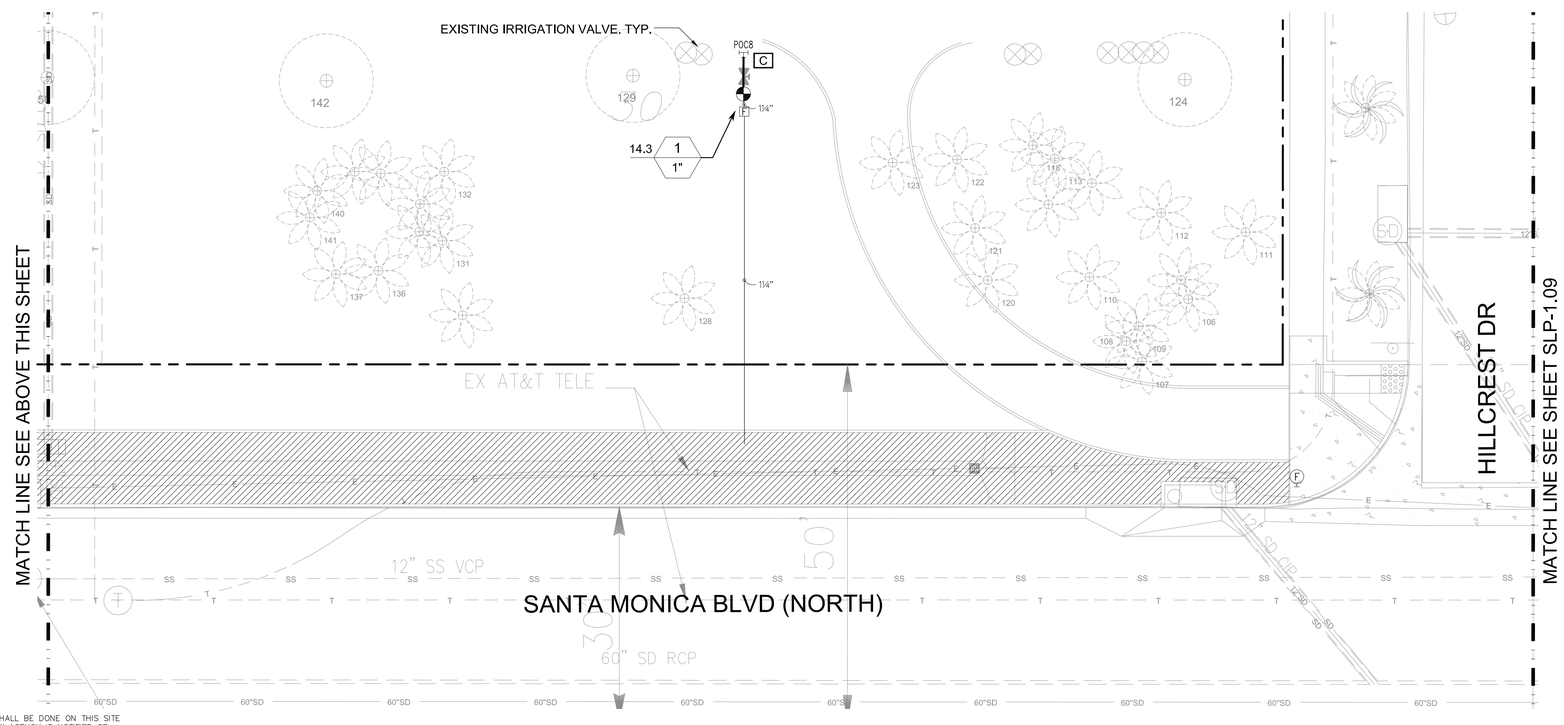

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Signature
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Date
STATE OF CALIFORNIA

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PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

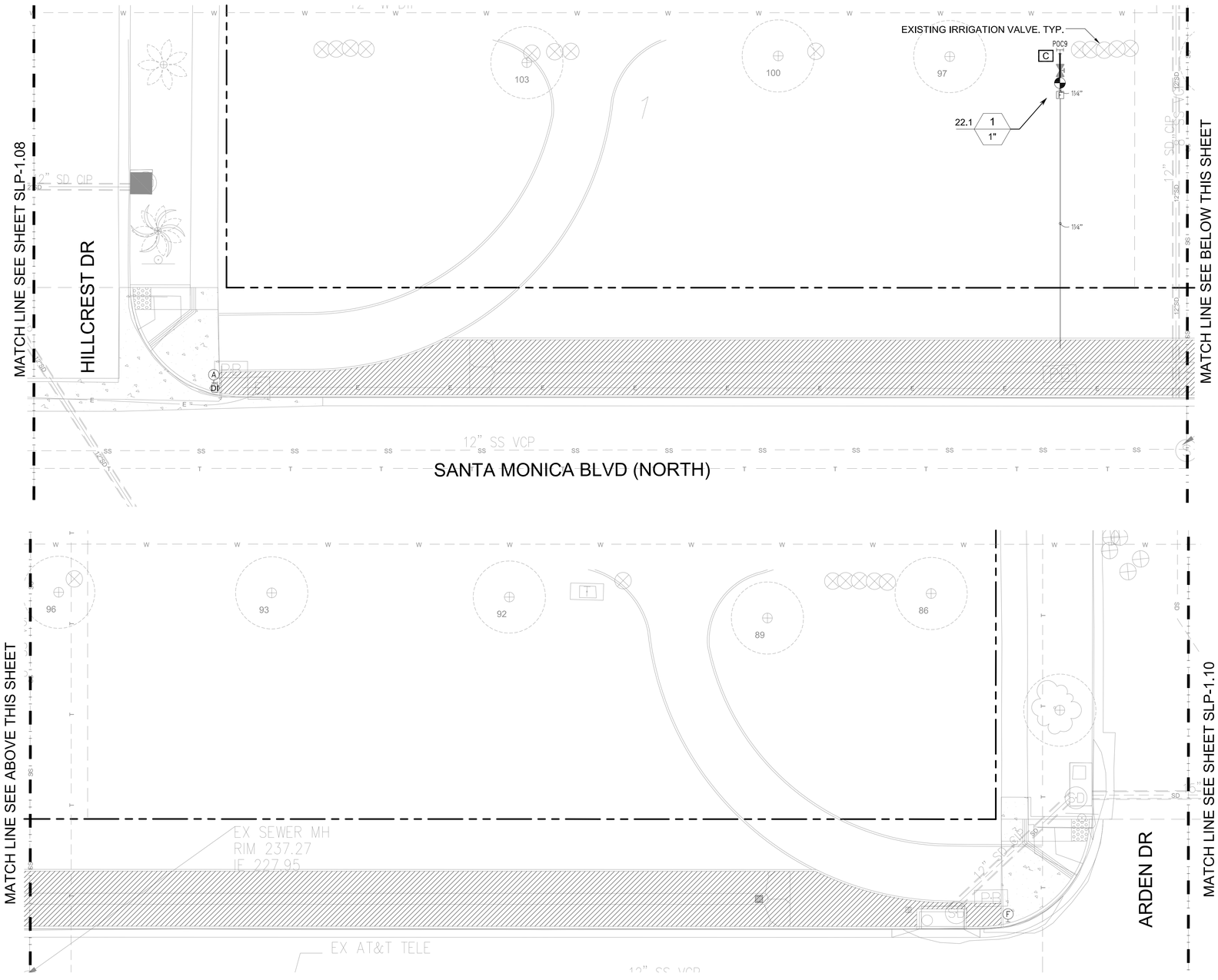
IRRIGATION PLAN SLP-1.08

WILSHIRE BOULEVARD TO DOHENY DRIVE

SUBMITTED _____ DATE _____
APPROVED _____ DATE _____

JOB NO. 2184
DRAWING NO. 7449
SHEET 10 OF 27 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT



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PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

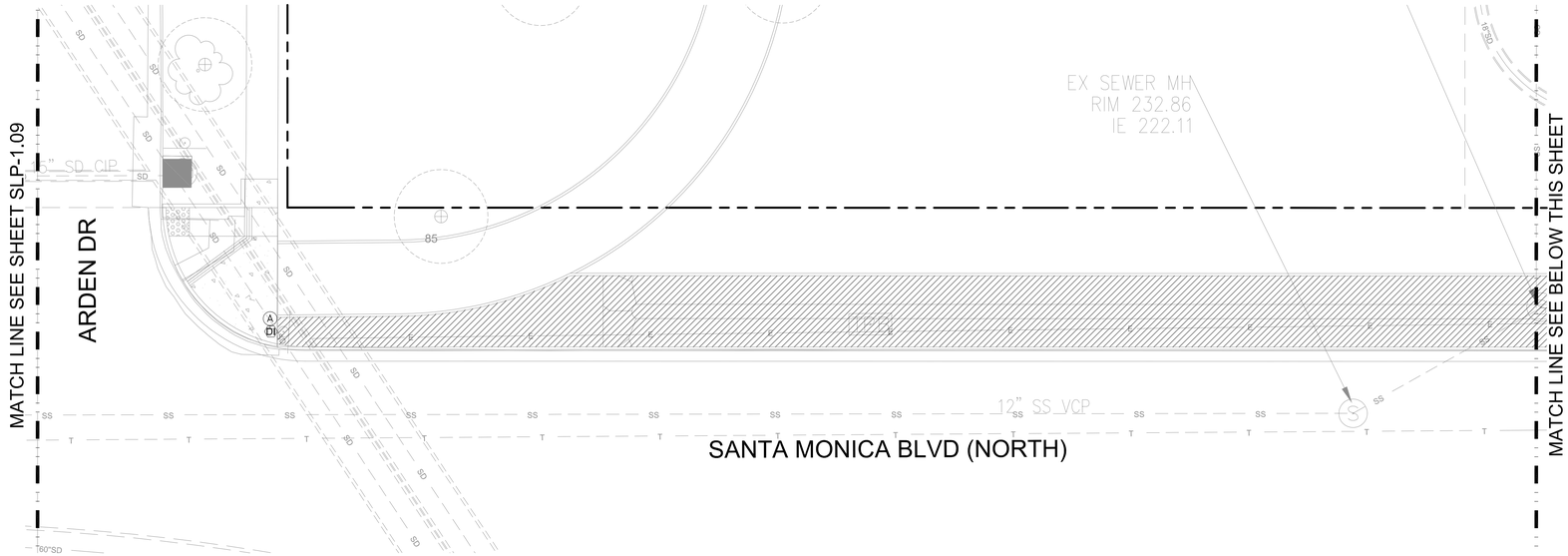
IRRIGATION PLAN
SLP-1.09

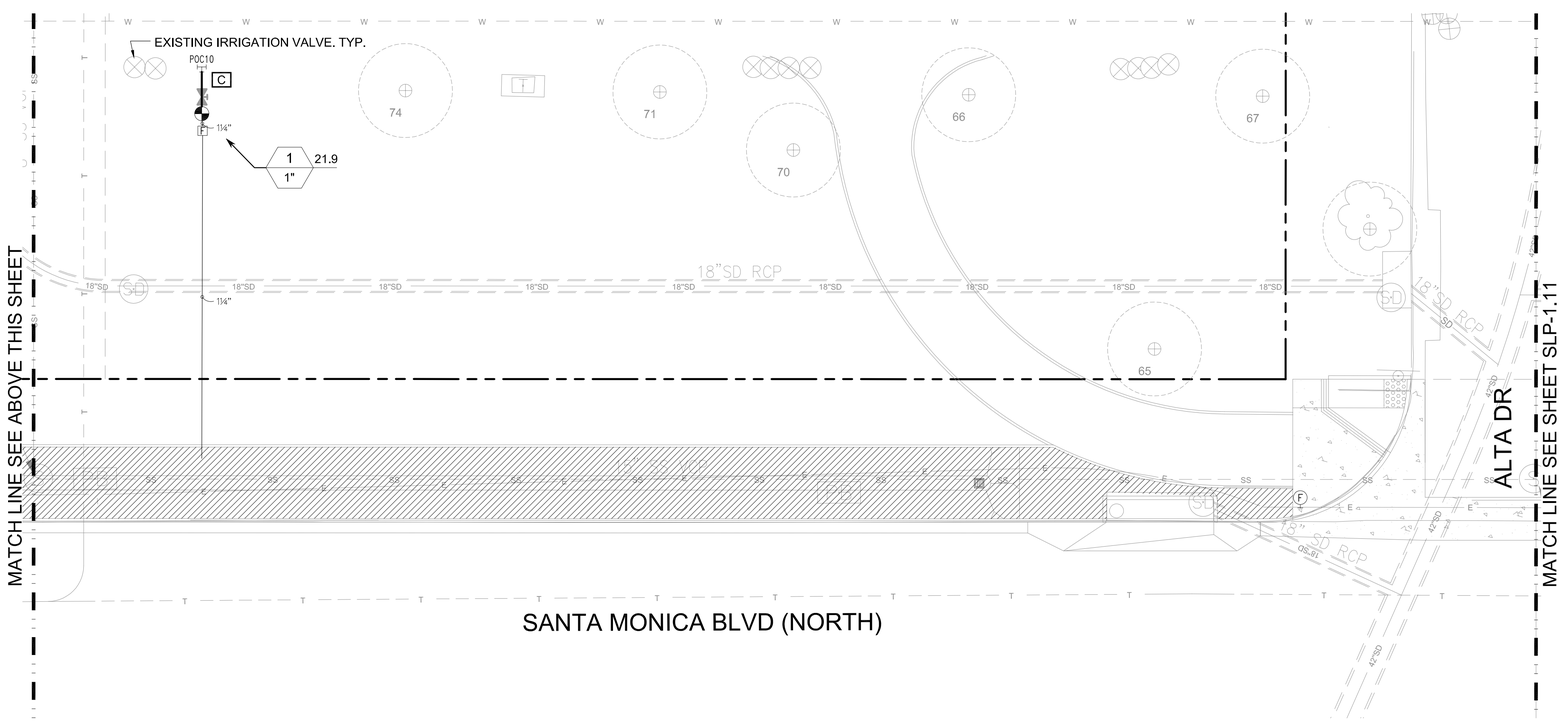
WILSHIRE BOULEVARD TO DOHENY DRIVE

SUBMITTED _____ DATE _____
APPROVED _____ DATE _____

JOB NO. 2184
DRAWING NO. 7449
SHEET 11 OF 27 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT





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WARNING:
BEFORE STARTING WORK ON EXISTING SERIES STREET LIGHTING CIRCUITS, CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM THE SERVING UTILITY. CUT-OUT PLUGS MUST BE PULLED AND "MEN AT WORK" SIGNS POSTED BEFORE ANY WORK IS DONE OR CONNECTIONS MADE.

NOTE

1. EXISTING TURF IRRIGATION HEADS TO BE MOVED NORTH ADJACENT TO NEW MOW CURB. CONTRACTOR SHALL ADJUST HEAD RADIUS FOR PROPER HEAD TO HEAD COVERAGE TO EXISTING TURF AREAS.

0 5' 10' 20'
1" = 10'

N

LICENSED LANDSCAPE ARCHITECT
REY P. HUTCHINGS
Signature
5/30/12
Renewal Date
5/26/16
Date
STATE OF CALIFORNIA

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PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

IRRIGATION PLAN
SLP-1.10

WILSHIRE BOULEVARD TO DOHENY DRIVE

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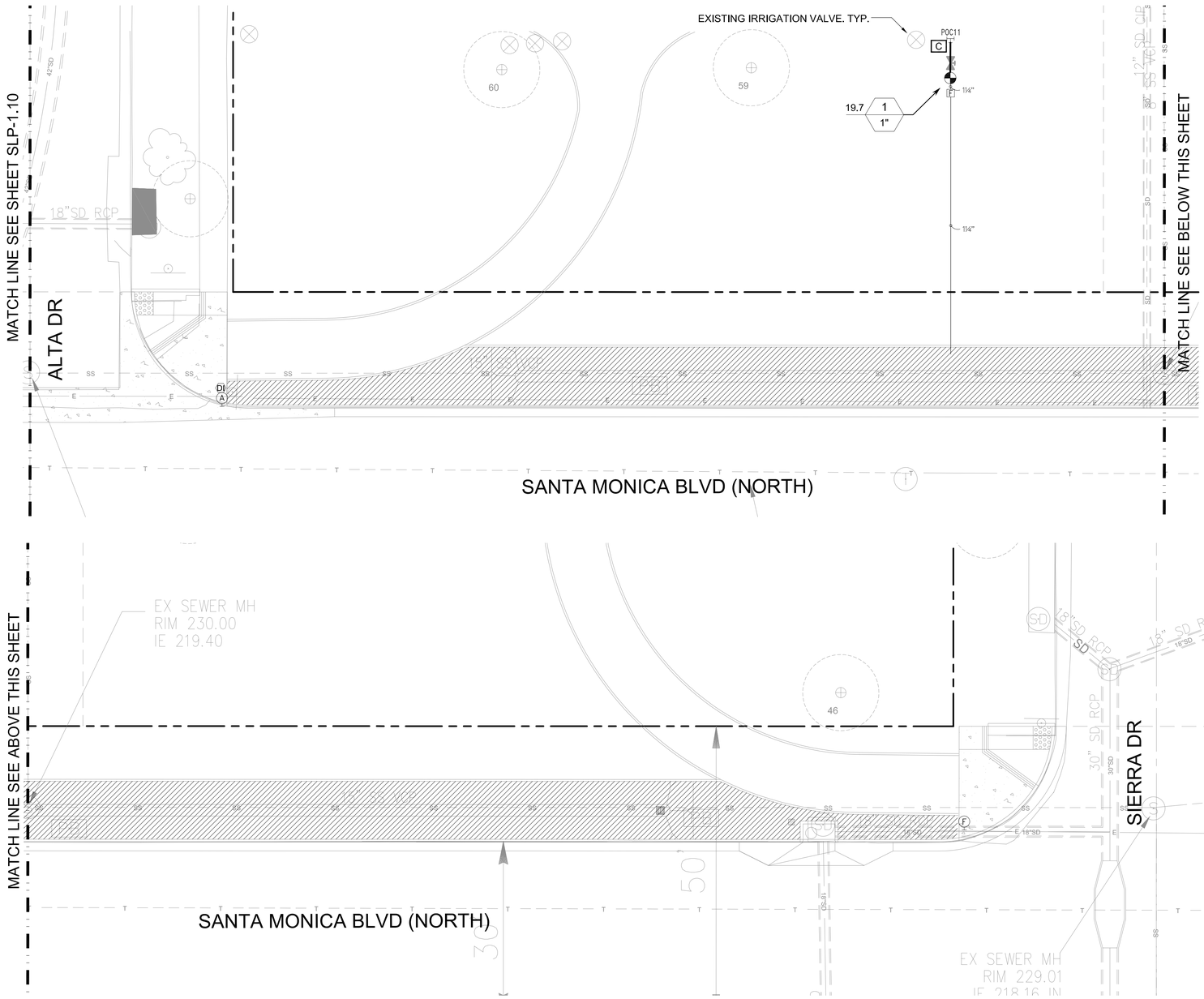
CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT



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REBY P. HUTCHINS 4867
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PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

IRRIGATION PLAN
SLP-1.11

WILSHIRE BOULEVARD TO DOHENY DRIVE

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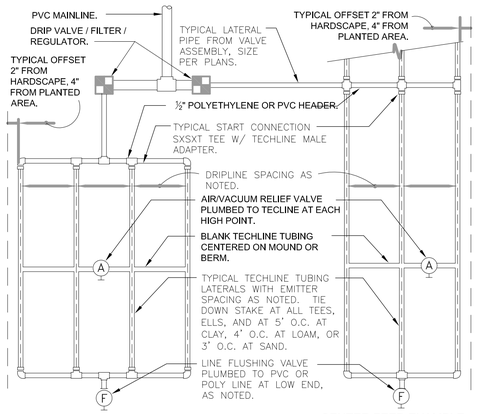
CIVIL ENGINEERING DEPARTMENT



SLOPED CONDITION NOTES:

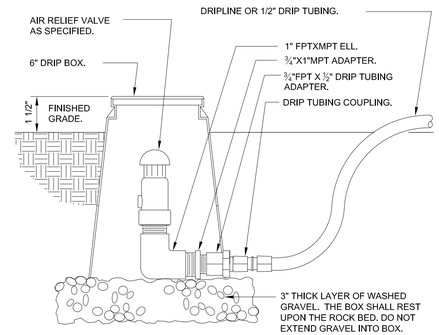
1. DRIPLINE LATERALS SHOULD FOLLOW THE CONTOURS OF THE SLOPE WHENEVER POSSIBLE.
2. INSTALL AIR RELIEF VALVE AT HIGHEST POINT.
3. TECHLINE NORMAL SPACING WITHIN THE TOP ⅔ OF SLOPE.
4. INSTALL TECHLINE AT NORMAL SPACING PLUS 25% AT THE BOTTOM ⅓ OF THE SLOPE.
5. WHEN ELEVATION CHANGE IS 10 FT OR MORE, ZONE THE BOTTOM ⅓ ON A SEPARATE VALVE.

TECHLINE MAXIMUM LENGTH OF SINGLE LATERAL (FEET)

DRIPPER SPACING		12"			18"			24"	
DRIPPER FLOW RATE (GPH)		0.4	0.6	0.9	0.4	0.6	0.9	0.6	0.9
INLET PRESSURE (PSI)	15	292	233	175	410	322	247	405	308
	25	397	321	238	558	438	335	553	423
	35	486	365	279	656	514	394	649	497
	45	520	407	311	732	574	439	725	555

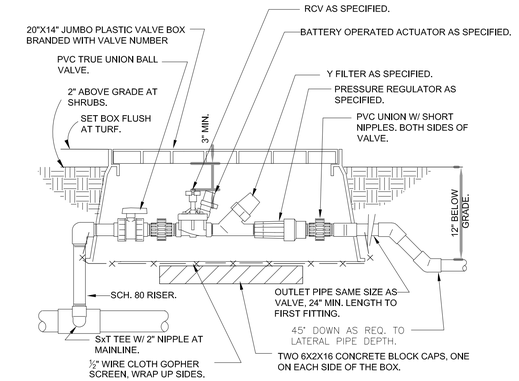
TECHLINE FLOW PER 100 FEET

DRIPPER SPACING	0.4 GPH DRIPPER		0.6 GPH DRIPPER		0.9 GPH DRIPPER	
DRIPPER SPACING	GPH	GPM	GPH	GPM	GPH	GPM
12"	40.00	0.67	61.00	1.02	92.00	1.53
18"	26.67	0.44	41.00	0.68	61.00	1.02
24"	N/A	N/A	31.00	0.51	46.00	0.77



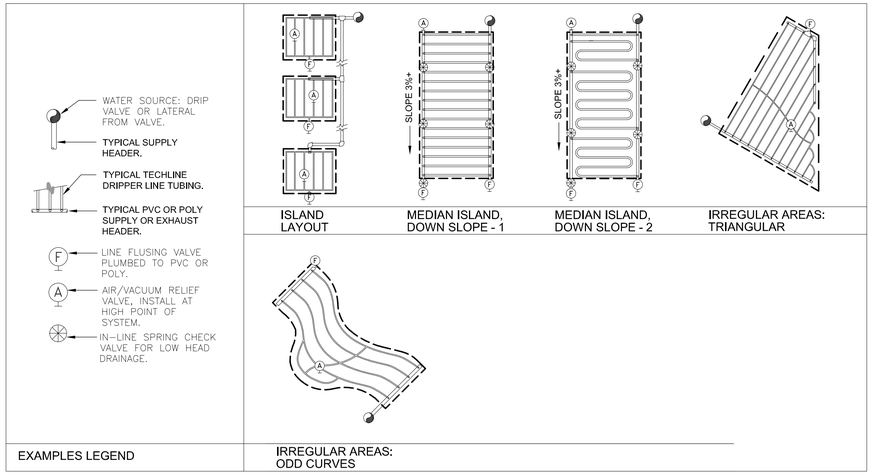
2 DRIP AIR RELIEF VALVE IN BOX

N.T.S. P-SM1-328413-03



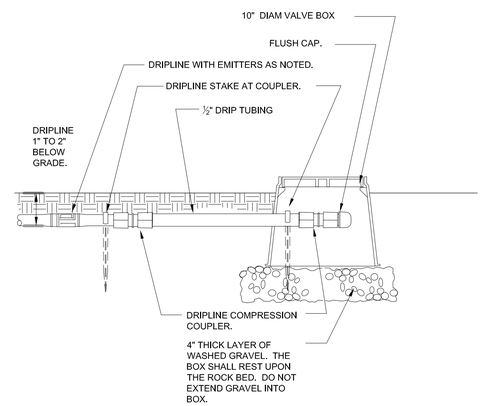
1 1" DRIP VALVE/FILTER/REGULATOR

1 1/2" = 1'-0" P-SM1-328413-01



4 TYPICAL NETAFIM TECHLINE REQUIREMENTS

3" = 1'-0" P-SM1-328413-29



3 DRIPLINE FLUSH VALVE BELOW GRADE

3" = 1'-0" P-SM1-328413-23

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LICENSED LANDSCAPE ARCHITECT
REY P. HUTCHINS 3987
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IRRIGATION DETAILS
SLP-1.12

WILSHIRE BOULEVARD TO DOHENY DRIVE

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APPROVED _____ DATE _____

JOB NO. 2184
DRAWING NO. 7449
SHEET 14 OF 27 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT

TREE PRESERVATION SPECIFICATIONS

THESE TREE SPECIFICATIONS SHALL BE FOLLOWED TO PROTECT ALL TREES WHOSE DRIPLINE IS ENCROACHED UPON EITHER DIRECTLY OR INDIRECTLY BY CONSTRUCTION WITHIN CITY PARKS.

A CITY FORESTRY MANAGER SHALL BE INVITED TO THE JOB START MEETING AND ALSO NOTIFIED 48-HOURS PRIOR TO CONSTRUCTION.

GENERAL REQUIREMENTS

1. NO EQUIPMENT IS TO BE OPERATED OR PARKED UNDER A TREE, NOR ARE ANY MATERIALS TO BE STORED WITHIN THE DRIPLINE OF A TREE OR LEANED AGAINST A TREE TRUNK. DO NOT PILE OR COMPACT SOIL WITHIN A DRIPLINE.
2. IN AREAS OF CONSTRUCTION, PROTECT SOIL SURFACE FROM TRAFFIC COMPACTION WITH 3" OF MULCH OR OVERLAPPING 3/4" PLYWOOD SHEETS.
3. NO SURFACE IRRIGATION SHALL BE INSTALLED WITHIN THE DRIPLINE OF A TREE.
4. NO CHEMICAL HERBICIDES ARE TO BE USED WITHIN 100 FT. OF A TREE'S DRIPLINE.
5. DO NOT NAIL GRADE STAKES OR ANYTHING ELSE TO TREES.
6. ENCROACHMENT FROM PAVING OR STRUCTURES WITHIN THE DRIPLINE OF A TREE SHALL BE PERMITTED ONLY WITH WRITTEN AUTHORIZATION FROM THE FORESTRY MANAGER. NO ENCROACHMENT WITHIN 10' OF A TREE TRUNK WILL BE PERMITTED UNDER ANY CIRCUMSTANCES.
7. DO NOT STRIP TOPSOIL AROUND TREES. ANY VEGETATION TO BE REMOVED SHOULD BE REMOVED BY CUTTING AT GROUND LEVEL RATHER THAN PULLING OUT BY EQUIPMENT.
8. USE A PNEUMATIC DRILL TO EXCAVATE UNDER WOODY ROOTS LARGER THAN 2" IN DIAMETER. DO NOT CUT ANY ROOT LARGER THAN 2" DIAMETER. IF ROOTS MUST BE SEVERED, CUTS ARE TO BE MADE BY AN ARBORIST AND SOIL BACKFILLED IMMEDIATELY.

TYPICAL WORK PROCEDURES

ALL WORK AROUND ANY EXISTING TREES SHALL FOLLOW THIS WORK PROCEDURES PROGRAM. THIS PROGRAM HAS BEEN DEVELOPED TO MINIMIZE THE IMPACTS TO EACH TREE AND PROTECT THEM FROM UNSCHEDULED DAMAGE.

1. ALL WORK WITHIN A TREE'S ROOT ZONE SHALL BE OBSERVED BY CITY FORESTRY MANAGER.
2. THE EXTENT OF ALL WORK AFFECTING ANY TREE SHALL BE STAKED BY FIELD SURVEY AND REVIEWED WITH THE CITY'S FORESTRY MANAGER PRIOR TO CONSTRUCTION.
3. ANY APPROVED PRUNING OF TREES SHALL BE APPROVED BY CITY'S FORESTRY MANGER PRIOR TO THE START OF CONSTRUCTION.
4. HAND DIG VERTICAL TRENCH AT THE FINAL CUT LINE TO FINAL GRADE AND CLEANLY CUT ANY ROOTS ENCOUNTERED AND SEAL WITH APPROVED TREE SEAL. (THIS PROCEDURE WILL PROTECT THE ROOT SYSTEM FROM UNNECESSARY DAMAGE BY EXCAVATION EQUIPMENT).
5. A FIVE (5) FOOT HIGH CHAIN LINK FENCE SHALL BE CONSTRUCTED AT THE LIMIT OF APPROVED WORK TO PROTECT THE TREES FROM FURTHER UNAUTHORIZED DAMAGE AND REMAIN IN PLACE UNTIL COMPLETION OF CONSTRUCTION.
6. NO FURTHER WORK WITHIN THE ROOT ZONE SHALL BE DONE BEYOND THAT WHICH WAS APPROVED, WITHOUT OBTAINING WRITTEN APPROVAL FORM CITY'S FORESTRY MANAGER PRIOR TO PROCEEDING.
7. THE AREA WITHIN THE CHAIN LINK FENCE SHALL NOT BE USED FOR MATERIAL OR EQUIPMENT STORAGE OR PARKING DURING CONSTRUCTION.
8. DURING CONSTRUCTION, THE IMPACTED TREES SHOULD BE CLOSELY MONITORED TO FURTHER MITIGATE SHOCK SYMPTOMS IF THEY OCCUR. THE CONTRACTOR SHOULD BE PREPARED TO PROVIDE TEMPORARY WATER TO IRRIGATE AND WASH THE DUST FROM FOLIAGE IF NEEDED. CONTACT CITY'S FORESTRY DIVISION IF A DECLINE IN TREE CONDITION IS NOTED.
9. THE CITY FORESTRY MANAGER IS AVAILABLE TO ANSWER ANY GENERAL QUESTIONS REGARDING TREES IN PARKS.

DAMAGES
IF A TREE THAT IS DESIGNATED TO REMAIN IS REMOVED OR CAUSED TO BE IRREVERSIBLY DAMAGED AS DETERMINED BY CITY'S FORESTRY MANAGER INSTALL A REPLACEMENT TREE MATCHING IN SIZE, QUALITY AND VARIETY . IF AN ACCEPTABLE REPLACEMENT TREE IS NOT AVAILABLE, PAY DAMAGES TO THE CITY FOR THE VALUE OF THE DAMAGED TREE AS ASSESSED BY THE TREE VALUE FORMULA IN THE ISA GUIDE FOR ESTABLISHING VALUE OF TREES AND OTHER PLANTS.

IMPLEMENTATION
THE QUALIFICATIONS OF TREE CONSULTANTS SHALL ALSO BE REVIEWED PRIOR TO REPORT PREPARATION. IF TREE REMOVALS ARE REQUESTED, THE STREET TREE DIVISION REVIEWS APPLICATIONS AND PASSES THEIR RECOMMENDATIONS TO THE BOARD OF PUBLIC WORKS FOR ACTION.

PLANTING NOTES

1. DRAWING IS DIAGRAMMATIC. VERIFY ALL LOCATIONS AND CONDITIONS ON SITE. COUNT ALL PLANT MATERIAL BEFORE BIDDING.
2. INSPECT ALL EXISTING CONDITIONS ON SITE AND LOCATE ALL EXISTING UTILITIES BEFORE CONSTRUCTION BEGINS. ALL TREE STAKING LOCATIONS TO BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO ANY DIGGING.
3. CONTRACTOR TO REPAIR AT HIS OWN EXPENSE ALL PROPERTY DAMAGE WHICH OCCURS DURING PROJECT INSTALLATION.
4. NOTE ADDITIONAL REMARKS ON SPECIFIC PLANTS IN PLANT LIST.
5. ALL EXISTING PLANT MATERIAL TO BE REMOVED EXCEPT WHERE NOTED ON PLAN.
6. ALL PLANT MATERIAL TO BE GUARANTEED FOR 90 DAYS FROM THE DATE OF ACCEPTANCE BY OWNER. CONTRACTOR SHALL STORE PLANT MATERIAL IN SHADE AND PROTECT FROM SUN. ENSURE ON SITE WATERING PRIOR TO PLANTING.
7. FINISH GRADE TO BE 1" BELOW ALL WALKS, CURBS, AND PAVING.
8. ALL PLANTED AREAS SHALL RECEIVE THE FOLLOWING AMENDMENTS PER 1,000 SQ. FT. OF SURFACE AREA. ROTO-TILL AMENDMENTS TO A DEPTH OF 6"
   *150 LBS. GRO-POWER
   *ADD 8 LBS OF GRO-P0WER CONTROLLED RELEASE 12-8-8 PER CU YD OF MIX.
9. PLANT HOLE TO BE TWICE AS WIDE AND DEEP AS THE PLANT ROOT BALL. BACKFILL AND COMPACT TO 80% WITH 60% SOIL OF SITE AND 40% FIR BARK, UNLESS OTHERWISE NOTED. PROVIDE GRO-POWER PLANT TABLETS AT THE FOLLOWING RATES:
   1 GAL 2
   5 GAL 5
   15 GAL 10
   24" BOX AND UP 14
   PLACE RECOMMENDED TABLETS BETWEEN THE BOTTOM AND THE TOP OF THE ROOT BALL BUT NO HIGHER THAN 1/3 OF THE WAY UP TO THE TOP OF THE ROOT BALL. SPACE TABLETS EQUALLY AROUND THE PERIMETER OF THE ROOT BALL APPROXIMATELY 2" FROM THE ROOT TIPS.
10. "DEEP ROOT" BARRIERS ARE TO BE USED AROUND ALL TREES LOCATED WITHIN 5 FT. OF PAVING. INSTALL PER MANUFACTURER'S SPECIFICATIONS. CONTRACTOR SHALL REMOVE ALL NURSERY STAKES AFTER PLANTING.
11. ALL PROPOSED SHRUB AND GROUND COVER AREAS ARE TO BE TREATED WITH A PRE-EMERGENT WEED KILLER (EPTAM / RONSTAR). APPLY PER MANUFACTURER'S SPECIFICATIONS:
   A) IMMEDIATELY AFTER PLANTING,
   B) AT THE BEGINNING OF THE MAINTENANCE PERIOD, AND
   C) AT THE END OF THE MAINTENANCE PERIOD.
12. ALL PLANTING AREAS TO BE TOP DRESSED WITH MULCH PER SPECIFICATIONS.
13. INSTALL AND MAINTAIN LANDSCAPE PLANTING IN ACCORDANCE WITH THE GOVERNING AGENCY'S GUIDELINES AND SPECIFICATIONS UNLESS NOTED OTHERWISE IN THESE NOTES OR ON THE PLANS.

NOTES

1. CONTRACTOR SHALL MAKE ALLOWANCE OF AN ADDITIONAL 20% OF SHRUBS AND GROUNDCOVER FOR IN-FILLED TO BE PLACED ON SITE BY LANDSCAPE ARCHITECT.
2. CITY FORESTRY MANAGER SHALL BE CONSULTED FOR REVIEW AND RECOMMENDATIONS ON EXISTING TREES AND ROOT SYSTEM IN CLOSE PROXIMATE TO BIOSWALE.

PLANT SCHEDULE

SHRUBS	CODE	BOTANICAL NAME / COMMON NAME	CONT		QTY	DETAIL
	BAC CEN	BACCHARIS X `CENTENNIAL` / CENTENNIAL COYOTE BRUSH	5 GAL		54	6/SPL-2.12
	ELY CON	ELYMUS CONDENSATUS / GIANT WILD RYE	5 GAL		115	6/SPL-2.12
	ELY CA2	ELYMUS CONDENSATUS `CANYON PRINCE` / CANYON PRINCE WILD RYE	5 GAL		246	6/SPL-2.12
	ERI WAY	ERIGERON GLAUCUS `WAYNE RODERICK` / SEASIDE DAISY	5 GAL		109	6/SPL-2.12
	IRI COA	IRIS DOUGLASIANA `PACIFIC COAST HYBRIDS` / PCH IRIS	5 GAL		84	6/SPL-2.12
	JUN PAT	JUNCUS PATENS / CALIFORNIA GRAY RUSH	5 GAL		657	6/SPL-2.12
	MUH RIG	MUHLENBERGIA RIGENS / DEER GRASS	5 GAL		100	6/SPL-2.12
	SIS BEL	SISYRINCHIUM BELLUM / BLUE EYED GRASS	1 GAL		55	6/SPL-2.12
GROUND COVERS	**CODE**	**BOTANICAL NAME / COMMON NAME**	**CONT**	**SPACING**	**QTY**	**DETAIL**
	BAC POZ	BACCHARIS PILULARIS CONSANGUINEA `POZO SURF` / LOWLY COYOTE BRUSH	1 GAL	36" o.c.	284	7/SPL-2.12
	CAR PAN	CAREX PANSA / SANDDUNE SEDGE	1 GAL	12" o.c.	5,274	7/SPL-2.12
	CAR GRE	CARISSA MACROCARPA `GREEN CARPET` / GREEN CARPET NATAL PLUM	5 GAL	36" o.c.	456	7/SPL-2.12
	COP KIR	COPROSMA KIRKII / CREEPING MIRROR PLANT	5 GAL	48" o.c.	281	7/SPL-2.12
	SES AUT	SESLERIA AUTUMNALIS / AUTUMN MOOR GRASS	5 GAL	12" o.c.	3,286	7/SPL-2.12
	TUR SOD	TURF SOD / REPLACE DAMAGED TURF BY CONSTRUCTION	SOD		30,694 SF	

ABBREVIATIONS

@	AT
A.C.	ASPHALTIC CONCRETE
A.D.	AREA DRAIN
EA.	EACH
EQ.	EQUAL
EX.	EXISTING
FG	FINISH GRADE
FS	FINISH SURFACE
HT.	HEIGHT
POB.	POINT OF BEGINNING
L.O.W.	LIMIT OF WORK
MAX.	MAXIMUM
MIN.	MINIMUM
0.C.	ON CENTER
P.A.	PLANTING AREA
PP	POWER POLE
PL	PROPERTY LINE
+	CENTER OF RADIUS
⌒	ALIGN

REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
1	CURB RAMP. PER CIVIL
2	CURB & GUTTER BY CIVIL
3	AREA DRAIN. PER CIVIL
4	RIGHT-OF-WAY
5	(E) TREE. PROTECT IN PLACE
6	FUTURE D.G. PATH & MOW CURB

REFERENCE NOTES SCHEDULE

SYMBOL	PAVING DESCRIPTION	DETAIL	MANUFACTURER	MATERIALS	FINISH	COLOR	REMARKS	SIZE	NOTES
P-101	UNIT PAVER	3/SPL-2.12	ACKERSTONE	CONCRETE	FACE MIX GRIND	MESA BEIGE	NO CHAMFER	3"X9"	
P-102	MOW CURB	1/SPL-2.12	DAVIS COLOR	CAST IN PLACE CONCRETE	SMOOTH TROWEL	MESA BUFF		4"	
P-104	CRUSH STONE		SOUTHWEST BOULDERS	CRUSHED STONE	LOOSE GRAVEL	CALIFORNIA GOLD		1-3"	3" THK.
P-105	STEPPING STONE		STEPSTONE OR EQ.	CONCRETE	FACE MIX GRIND	MESA BUFF/DAVIS COLOR			

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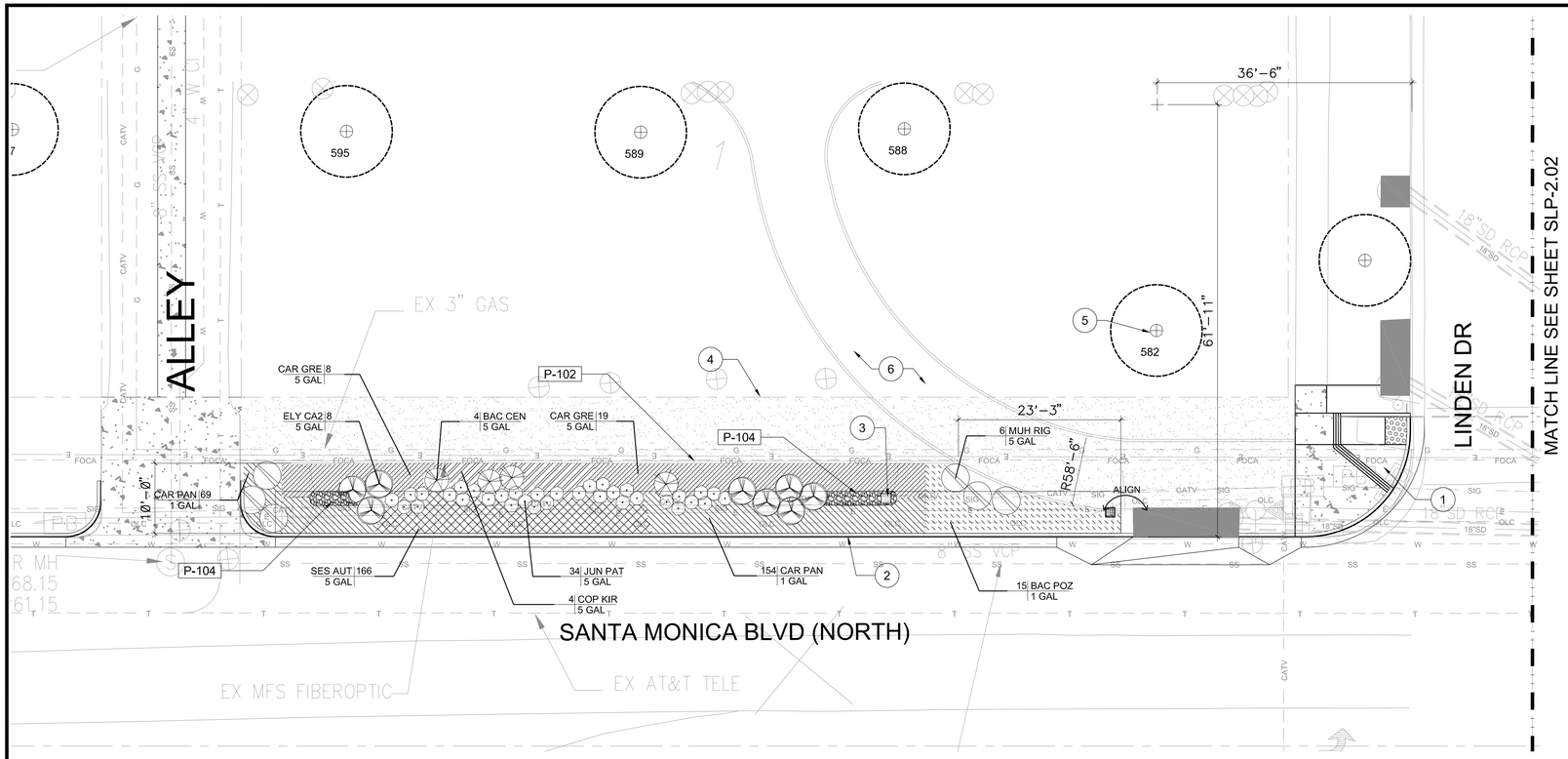

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	CAR GRE	CARISSA MACROCARPA `GREEN CARPET` / GREEN CARPET NATAL PLUM
	COP KIR	COPROSMA KIRKII / CREEPING MIRROR PLANT
	SES AUT	SESLERIA AUTUMNALIS / AUTUMN MOOR GRASS
	TUR SOD	TURF SOD / REPLACE DAMAGED TURF BY CONSTRUCTION

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P-102	MOW CURB	1/SPL-2.12	DAVIS COLOR	CAST IN PLACE CONCRETE	SMOOTH TROWEL	MESA BUFF		4"	
P-104	CRUSH STONE		SOUTHWEST BOULDERS	CRUSHED STONE	LOOSE GRAVEL	CALIFORNIA GOLD		1-3"	3" THK.
P-105	STEPPING STONE		STEPSTONE OR EQ.	CONCRETE	FACE MIX GRIND	MESA BUFF/DAVIS COLOR			

REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
1	CURB RAMP. PER CIVIL
2	CURB & GUTTER BY CIVIL
3	AREA DRAIN. PER CIVIL
4	RIGHT-OF-WAY
5	(E) TREE. PROTECT IN PLACE
6	FUTURE D.G. PATH & MOW CURB

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

Underground Service Alert
Call: TOLL FREE
811
TWO WORKING DAYS BEFORE YOU DIG

WARNING:
BEFORE STARTING WORK ON EXISTING SERIES STREET LIGHTING CIRCUITS, CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM THE SERVING UTILITY. CUT-OUT PLUGS MUST BE PULLED AND "MEN AT WORK" SIGNS POSTED BEFORE ANY WORK IS DONE OR CONNECTIONS MADE.

0 5' 10' 20'
1" = 10'

N

LICENSED LANDSCAPE ARCHITECT
REY P. HUTCHINS 3893
Signature
9/30/17
Renewal Date
5/26/16
Date
STATE OF CALIFORNIA

SCALE AS SHOWN		
F.B. NO.	PAGE	TO
DESIGNED	DATE	
DRAWN	DATE	
CHECKED	DATE	

DATE	REVISION	BY
5/20	ADDENDUM 2	

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185 S. Myers St., Los Angeles, CA 90033
www.mlagreen.com

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

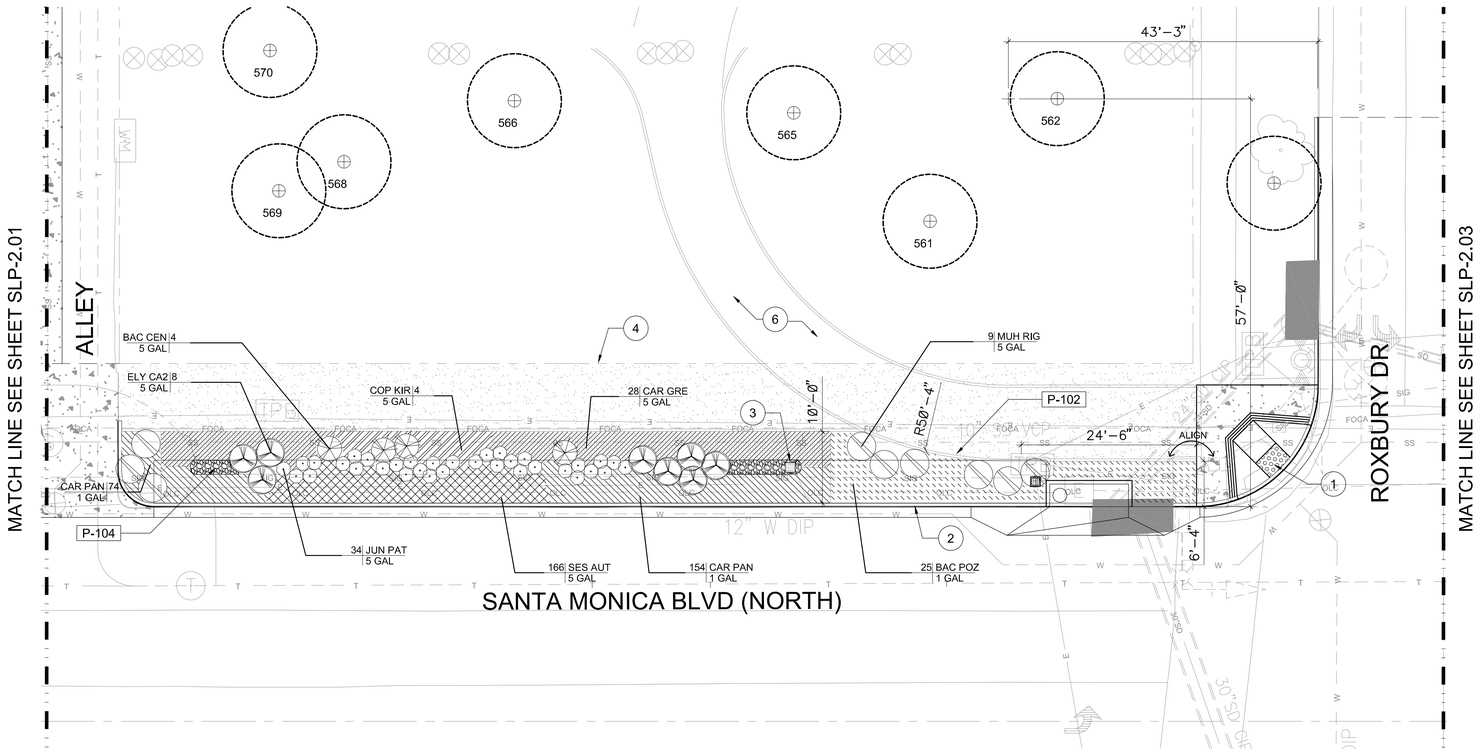
PLANTING PLAN
SLP-2.01

WILSHIRE BOULEVARD TO DOHENY DRIVE

SUBMITTED _____ DATE _____
APPROVED _____ DATE _____

JOB NO. 2184
DRAWING NO. 7449
SHEET 16 OF 27 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT



PLANT SCHEDULE

SHRUBS	CODE	BOTANICAL NAME / COMMON NAME
	BAC CEN	BACCHARIS X `CENTENNIAL` / CENTENNIAL COYOTE BRUSH
	ELY CON	ELYMUS CONDENSATUS / GIANT WILD RYE
	ELY CA2	ELYMUS CONDENSATUS `CANYON PRINCE` / CANYON PRINCE WILD RYE
	ERI WAY	ERIGERON GLAUCUS `WAYNE RODERICK` / SEASIDE DAISY
	IRI COA	IRIS DOUGLASIANA `PACIFIC COAST HYBRIDS` / PCH IRIS
	JUN PAT	JUNCUS PATENS / CALIFORNIA GRAY RUSH
	MUH RIG	MUHLENBERGIA RIGENS / DEER GRASS
	SIS BEL	SISYRINCHIUM BELLUM / BLUE EYED GRASS

GROUND COVERS	CODE	BOTANICAL NAME / COMMON NAME
	BAC POZ	BACCHARIS PILULARIS CONSANGUINEA `POZO SURF` / LOWLY COYOTE BRUSH
	CAR PAN	CAREX PANSA / SANDDUNE SEDGE
	CAR GRE	CARISSA MACROCARPA `GREEN CARPET` / GREEN CARPET NATAL PLUM
	COP KIR	COPROSMA KIRKII / CREEPING MIRROR PLANT
	SES AUT	SESLERIA AUTUMNALIS / AUTUMN MOOR GRASS
	TUR SOD	TURF SOD / REPLACE DAMAGED TURF BY CONSTRUCTION

REFERENCE NOTES SCHEDULE

SYMBOL	PAVING DESCRIPTION	DETAIL	MANUFACTURER	MATERIALS	FINISH	COLOR	REMARKS	SIZE	NOTES
P-101	UNIT PAVER	3/SPL-2.12	ACKERSTONE	CONCRETE	FACE MIX GRIND	MESA BEIGE	NO CHAMFER	3"X9"	
P-102	MOW CURB	1/SPL-2.12	DAVIS COLOR	CAST IN PLACE CONCRETE	SMOOTH TROWEL	MESA BUFF		4"	
P-104	CRUSH STONE		SOUTHWEST BOULDERS	CRUSHED STONE	LOOSE GRAVEL	CALIFORNIA GOLD		1-3"	3" THK.
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LICENSED LANDSCAPE ARCHITECT
MICHAEL P. HUTCHINGS
Signature
5/30/12
Renewal Date
5/26/16
Date
STATE OF CALIFORNIA

SCALE AS SHOWN		
F.B. NO.	PAGE	TO
DESIGNED	DATE	
DRAWN	DATE	
CHECKED	DATE	
5/20	ADDENDUM 2	
DATE	REVISION	BY

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185 S. Myers St., Los Angeles, CA 90033
www.mlagreen.com

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

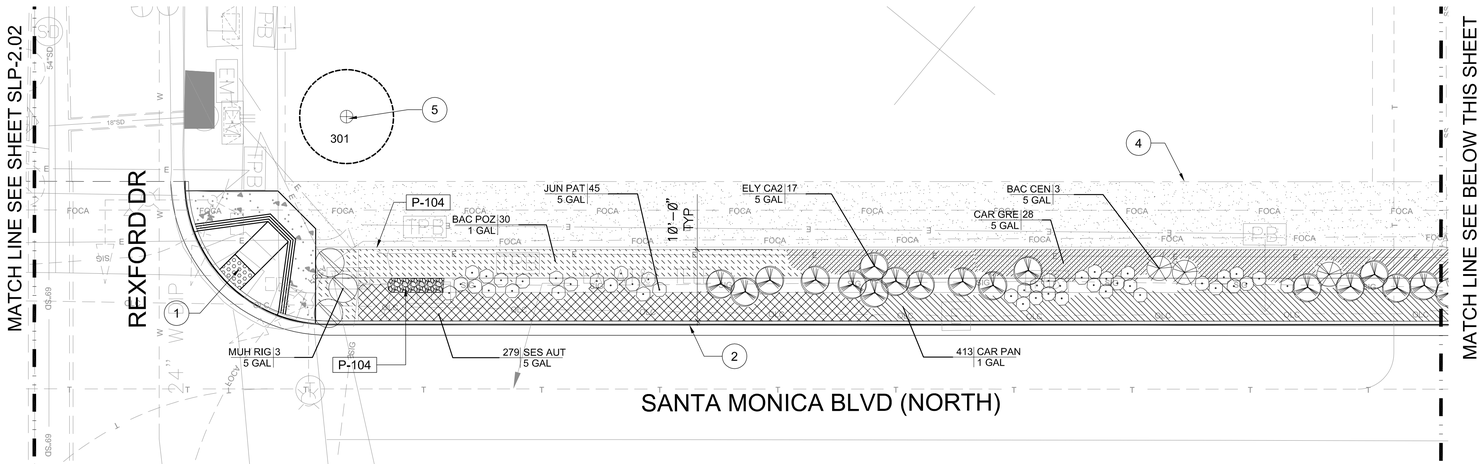
PLANTING PLAN
SLP-2.02

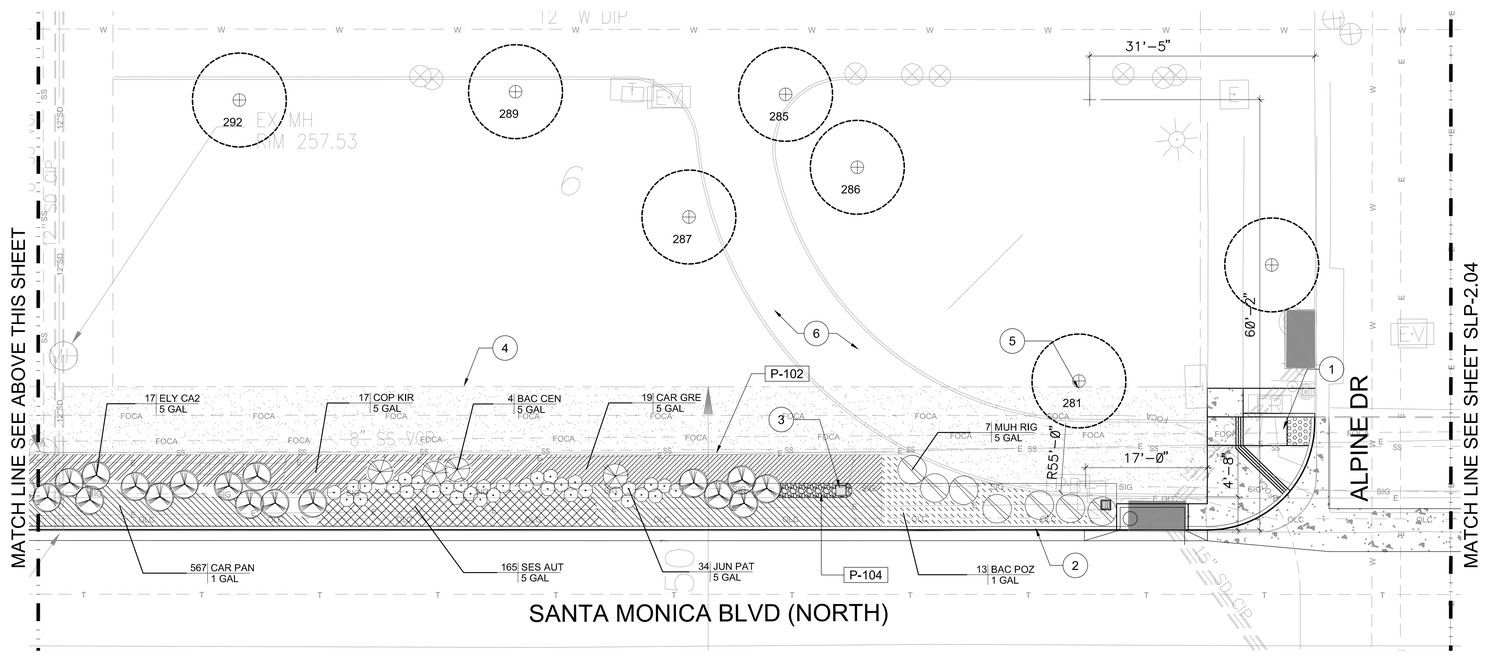
WILSHIRE BOULEVARD TO DOHENY DRIVE

SUBMITTED _____ DATE _____
APPROVED _____ DATE _____

JOB NO. 2184
DRAWING NO. 7449
SHEET 17 OF 27 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT





PLANT SCHEDULE

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	BAC CEN	BACCHARIS X `CENTENNIAL` / CENTENNIAL COYOTE BRUSH
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	IRI COA	IRIS DOUGLASIANA `PACIFIC COAST HYBRIDS` / PCH IRIS
	JUN PAT	JUNCUS PATENS / CALIFORNIA GRAY RUSH
	MUH RIG	MUHLENBERGIA RIGENS / DEER GRASS
	SIS BEL	SISYRINCHIUM BELLUM / BLUE EYED GRASS

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	CAR GRE	CARISSA MACROCARPA `GREEN CARPET` / GREEN CARPET NATAL PLUM
	COP KIR	COPROSMA KIRKII / CREEPING MIRROR PLANT
	SES AUT	SESLERIA AUTUMNALIS / AUTUMN MOOR GRASS
	TUR SOD	TURF SOD / REPLACE DAMAGED TURF BY CONSTRUCTION

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REFERENCE NOTES SCHEDULE

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P-104	CRUSH STONE		SOUTHWEST BOULDERS	CRUSHED STONE	LOOSE GRAVEL	CALIFORNIA GOLD		1-3"	3" THK.
P-105	STEPPING STONE		STEPSTONE OR EQ.	CONCRETE	FACE MIX GRIND	MESA BUFF/DAVIS COLOR			

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SCALE AS SHOWN		
F.B. NO.	PAGE	TO
DESIGNED	DATE	
DRAWN	DATE	
CHECKED	DATE	
5/20	ADDENDUM 2	
DATE	REVISION	BY

LICENSED LANDSCAPE ARCHITECT
JEFFREY P. HUTCHINS 3882
Signature
5/30/17
Renewal Date
5/26/16
Date
STATE OF CALIFORNIA

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MIA LEHRER + ASSOCIATES
185 S. Myers St., Los Angeles, CA 90033
www.mlagreen.com

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

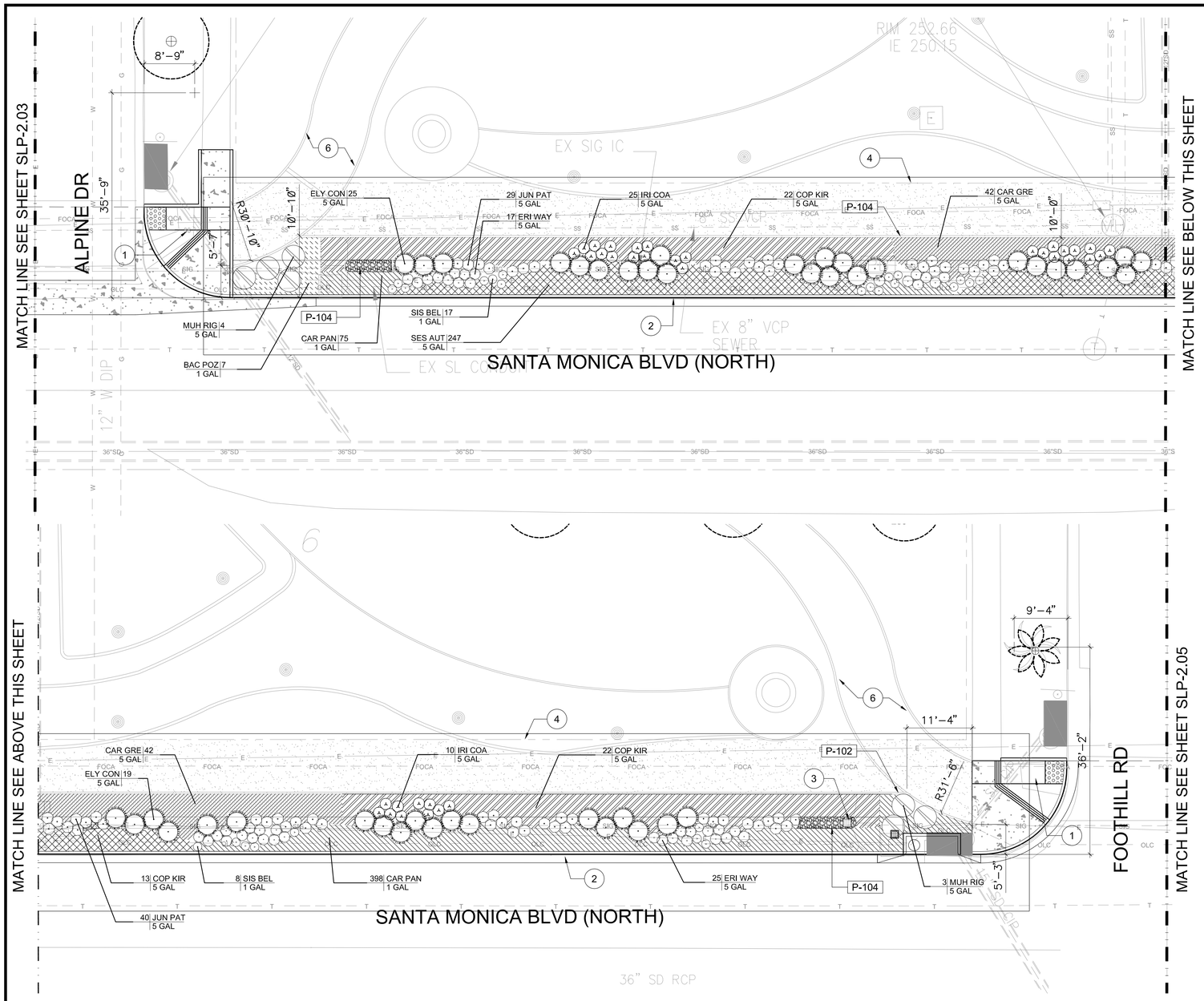
PLANTING PLAN SLP-2.03

WILSHIRE BOULEVARD TO DOHENY DRIVE

SUBMITTED _____ DATE _____
APPROVED _____ DATE _____

JOB NO. 2184
DRAWING NO. 7449
SHEET 18 OF 27 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT



PLANT SCHEDULE

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	BAC CEN	BACCHARIS X `CENTENNIAL` / CENTENNIAL COYOTE BRUSH
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SCALE AS SHOWN

F.B. NO.	PAGE	TO
DESIGNED	DATE	
DRAWN	DATE	
CHECKED	DATE	

DATE	REVISION	BY
5/20	ADDENDUM 2	

LICENSED LANDSCAPE ARCHITECT
JEFFREY P. HUTCHINS 3882
Signature
5/30/17
Renewal Date
5/26/16
Date
STATE OF CALIFORNIA

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MIA LEHRER + ASSOCIATES
185 S. Myers St., Los Angeles, CA 90033
www.mlagreen.com

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

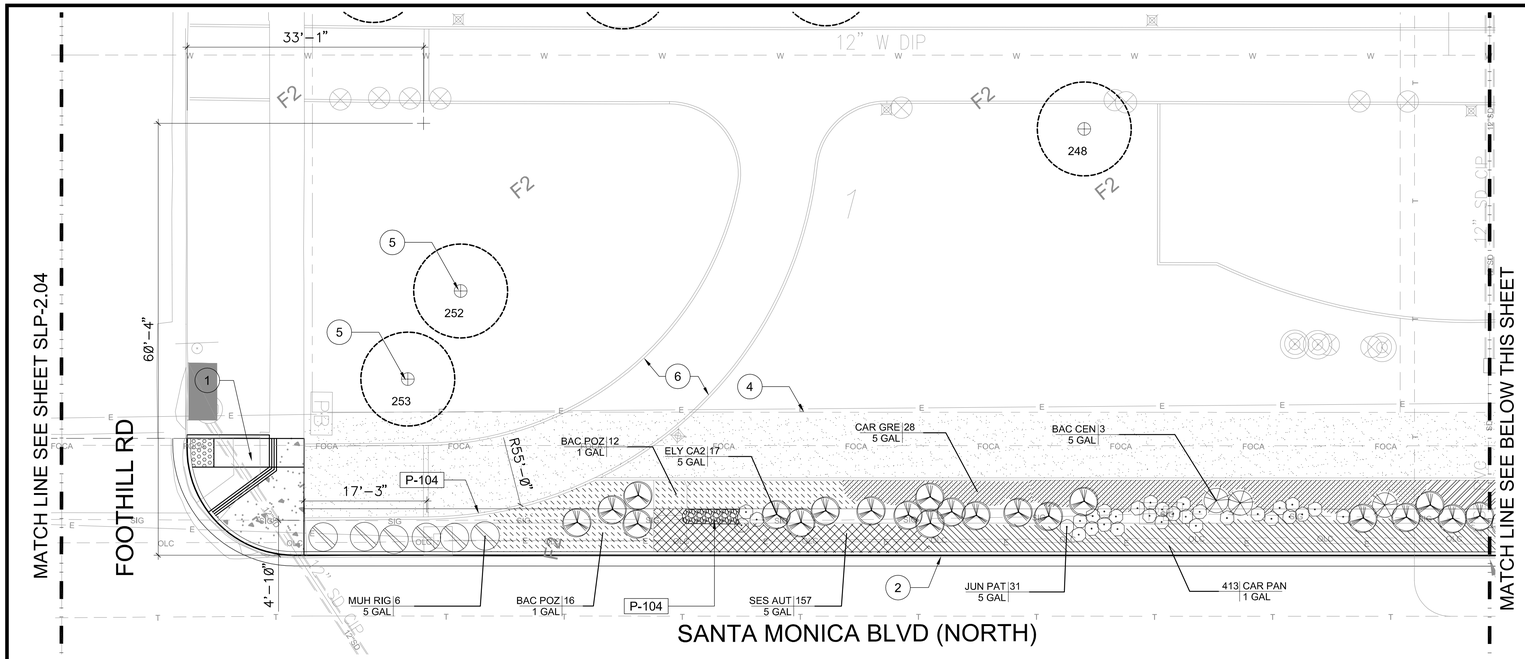
PLANTING PLAN
SLP-2.04

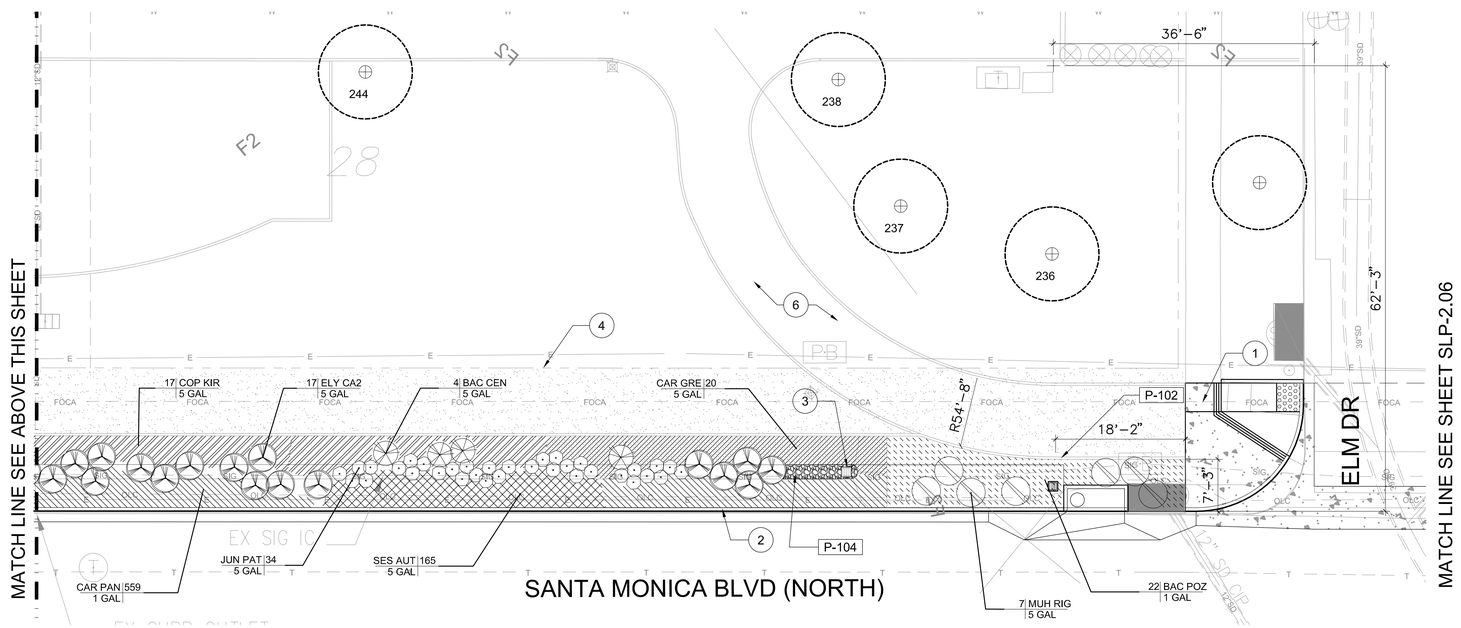
WILSHIRE BOULEVARD TO DOHENY DRIVE

SUBMITTED _____ DATE _____
APPROVED _____ DATE _____

JOB NO. 2184
DRAWING NO. 7449
SHEET 19 OF 27 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT





PLANT SCHEDULE

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REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
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N

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LICENSED LANDSCAPE ARCHITECT
JEFFREY P. HUTCHINS 3887
Signature
5/30/12
Renewal Date
5/26/16
Date
STATE OF CALIFORNIA

SCALE AS SHOWN		
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CHECKED	DATE	
5/20	ADDENDUM 2	
DATE	REVISION	BY

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MIA LEHRER + ASSOCIATES
185 S. Myers St., Los Angeles, CA 90033
www.mlagreen.com

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

PLANTING PLAN SLP-2.05

WILSHIRE BOULEVARD TO DOHENY DRIVE

SUBMITTED _____ DATE _____

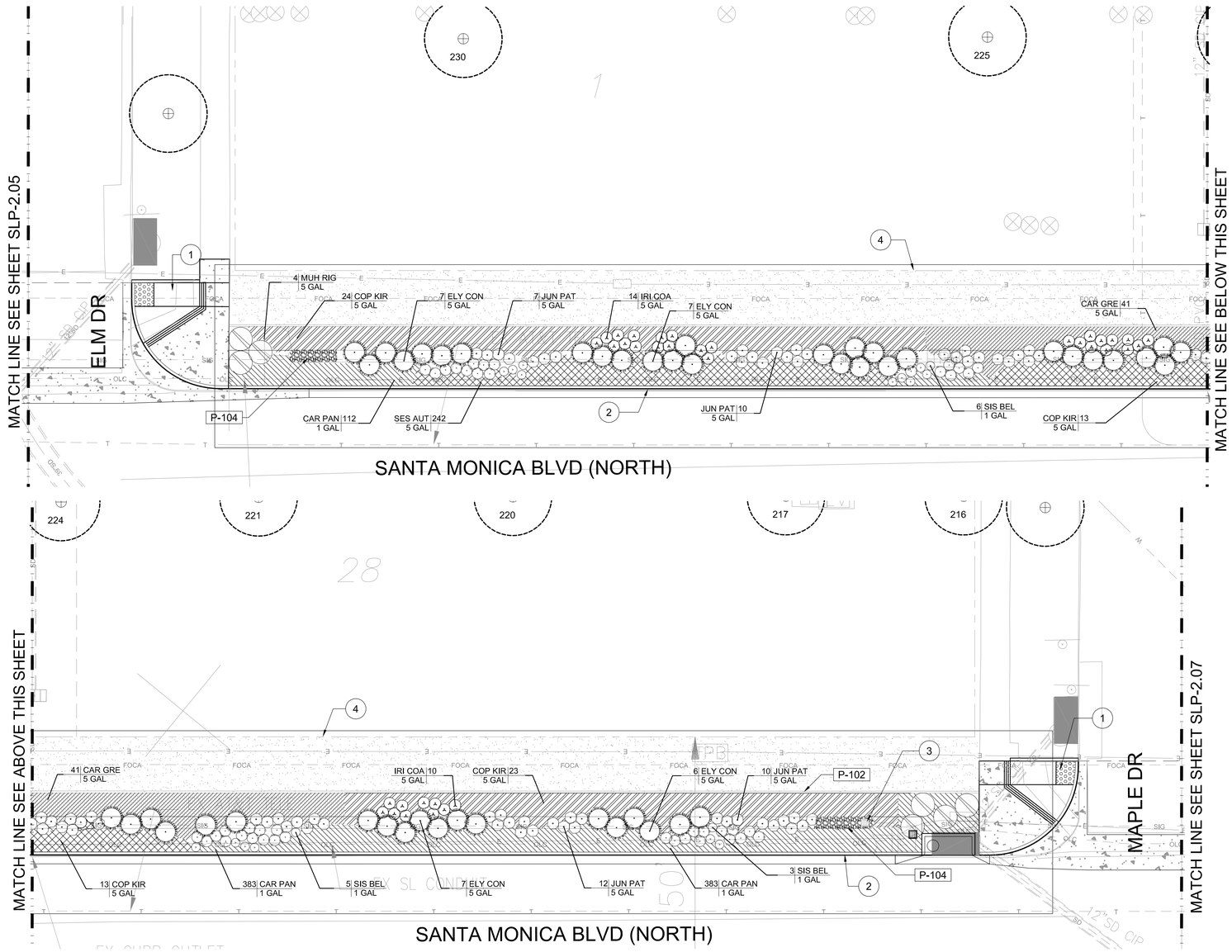
APPROVED _____ DATE _____

JOB NO. 2184

DRAWING NO. 7449

SHEET 20 OF 27 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT



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LICENSED LANDSCAPE ARCHITECT
REV. P. HUTCHINGS
Signature
5/30/17
Renewal Date
5/26/16
Date
STATE OF CALIFORNIA

SCALE AS SHOWN		
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DATE	REVISION	BY
5/20	ADDENDUM 2	

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MIA LEHRER + ASSOCIATES
185 S. Myers St., Los Angeles, CA 90033
www.mlagreen.com

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

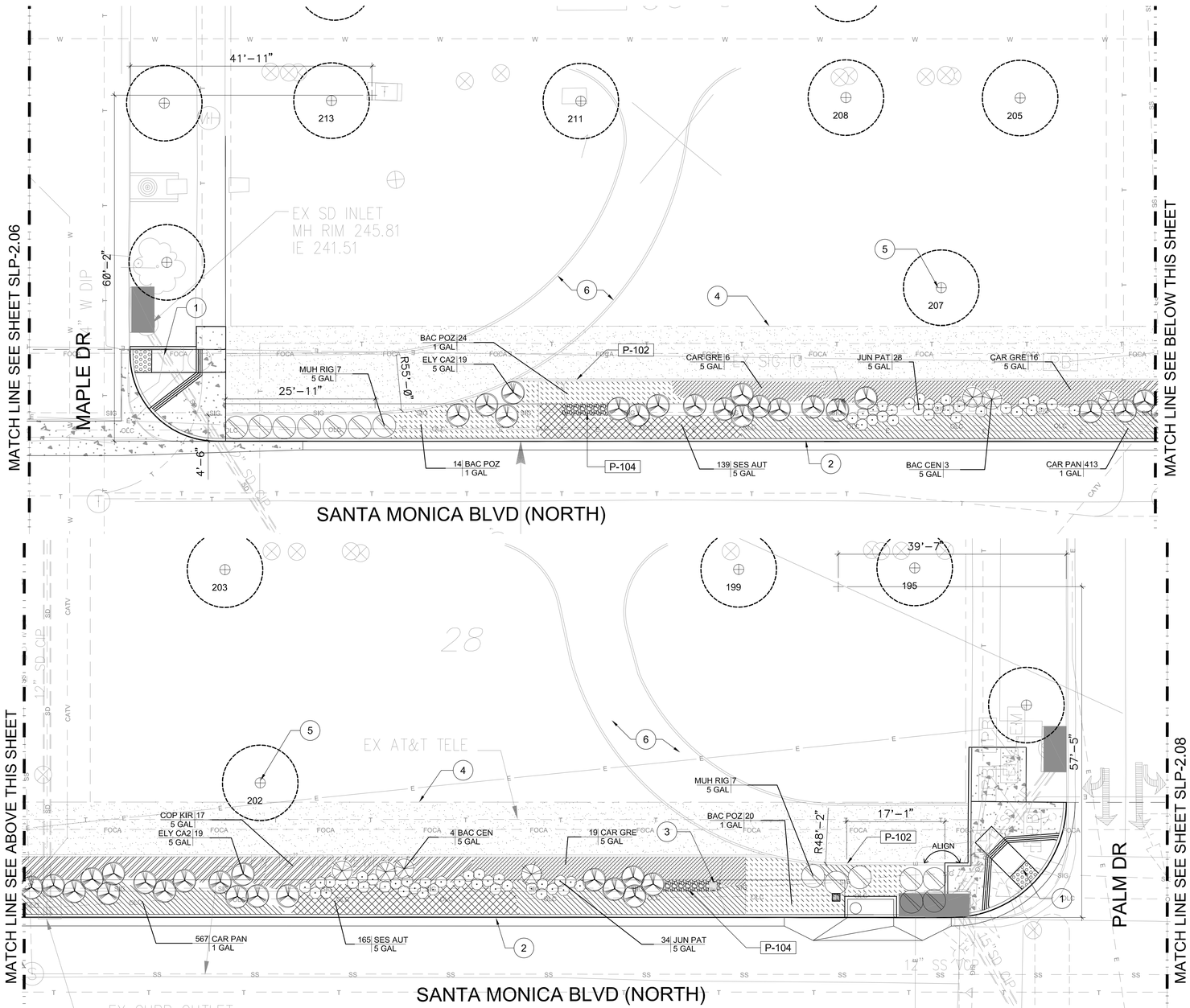
PLANTING PLAN
SLP-2.06

WILSHIRE BOULEVARD TO DOHENY DRIVE

SUBMITTED _____ DATE _____
APPROVED _____ DATE _____

JOB NO. 2184
DRAWING NO. 7449
SHEET 21 OF 27 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT



PLANT SCHEDULE

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	CAR GRE	CARISSA MACROCARPA `GREEN CARPET` / GREEN CARPET NATAL PLUM
	COP KIR	COPROSMA KIRKII / CREEPING MIRROR PLANT
	SES AUT	SESLERIA AUTUMNALIS / AUTUMN MOOR GRASS
	TUR SOD	TURF SOD / REPLACE DAMAGED TURF BY CONSTRUCTION

REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
1	CURB RAMP. PER CIVIL
2	CURB & GUTTER BY CIVIL
3	AREA DRAIN. PER CIVIL
4	RIGHT-OF-WAY
5	(E) TREE. PROTECT IN PLACE
6	FUTURE D.G. PATH & MOW CURB

REFERENCE NOTES SCHEDULE

SYMBOL	PAVING DESCRIPTION	DETAIL	MANUFACTURER	MATERIALS	FINISH	COLOR	REMARKS	SIZE	NOTES
P-101	UNIT PAVER	3/SPL-2.12	ACKERSTONE	CONCRETE	FACE MIX GRIND	MESA BEIGE	NO CHAMFER	3"X9"	
P-102	MOW CURB	1/SPL-2.12	DAVIS COLOR	CAST IN PLACE CONCRETE	SMOOTH TROWEL	MESA BUFF		4"	
P-104	CRUSH STONE		SOUTHWEST BOULDERS	CRUSHED STONE	LOOSE GRAVEL	CALIFORNIA GOLD		1-3"	3" THK.
P-105	STEPPING STONE		STEPSTONE OR EQ.	CONCRETE	FACE MIX GRIND	MESA BUFF/DAVIS COLOR			

N

0 5' 10' 20'

1" = 10'

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

Underground Service Alert
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TWO WORKING DAYS BEFORE YOU DIG

WARNING:
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LICENSED LANDSCAPE ARCHITECT
REY P. HUTCHINGS
5/30/17
Renewal Date
5/26/16
Date
STATE OF CALIFORNIA

SCALE AS SHOWN		
F.B. NO.	PAGE	TO
DESIGNED	DATE	
DRAWN	DATE	
CHECKED	DATE	
5/20	ADDENDUM 2	
DATE	REVISION	BY

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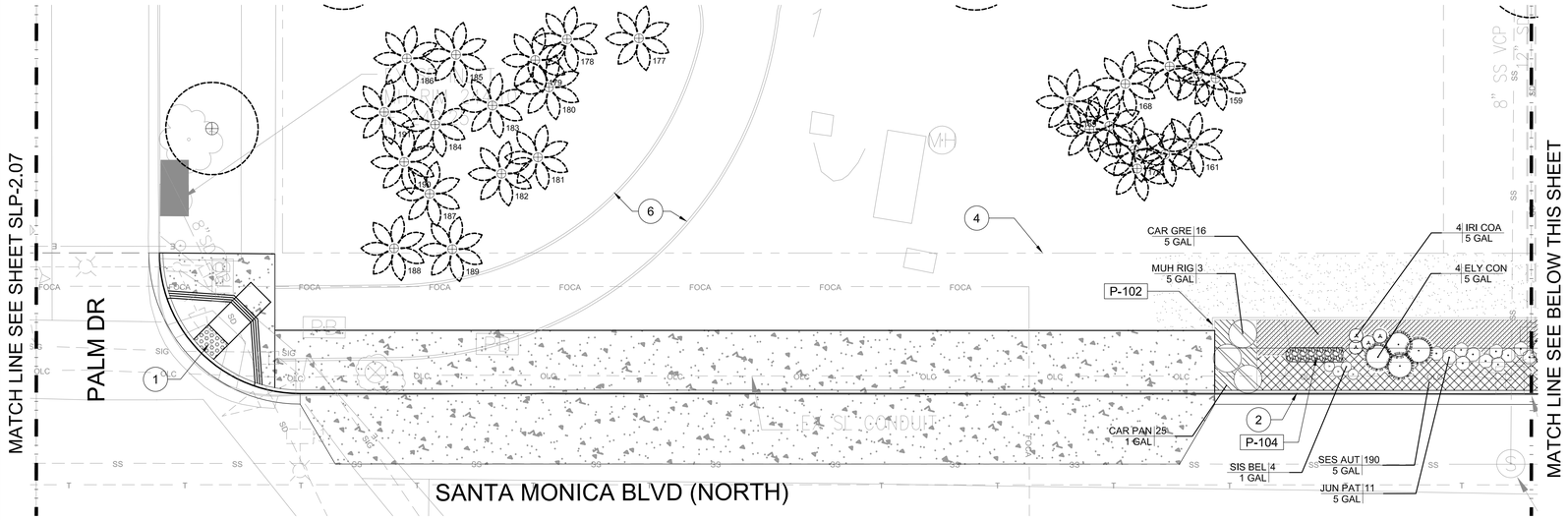
185 S. Myers St., Los Angeles, CA 90033
www.mlagreen.com

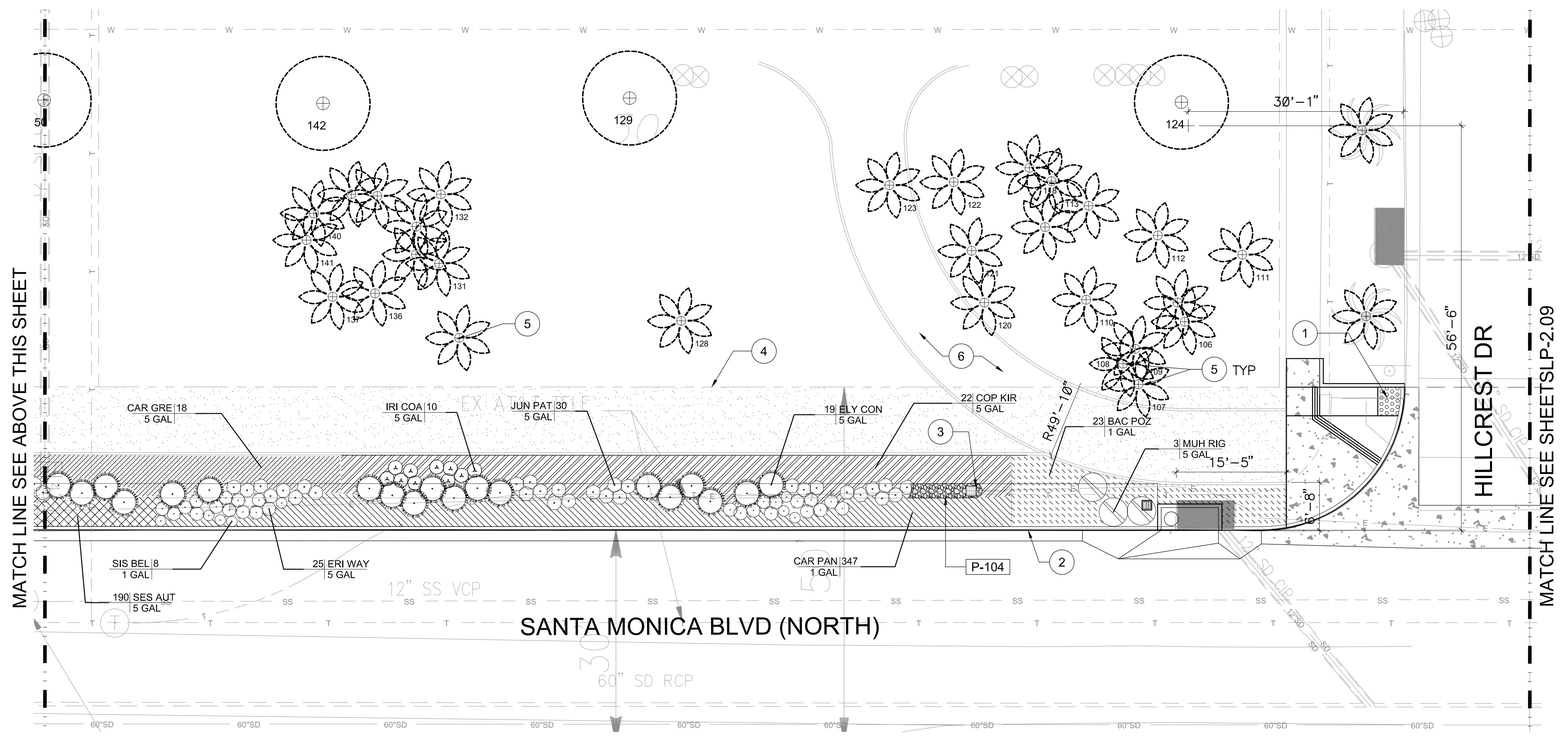
PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION
PLANTING PLAN
SLP-2.07
WILSHIRE BOULEVARD TO DOHENY DRIVE

SUBMITTED _____ DATE _____
APPROVED _____ DATE _____

JOB NO. 2184
DRAWING NO. 7449
SHEET 22 OF 27 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT





PLANT SCHEDULE

SHRUBS	CODE	BOTANICAL NAME / COMMON NAME
	BAC CEN	BACCHARIS X `CENTENNIAL` / CENTENNIAL COYOTE BRUSH
	ELY CON	ELYMUS CONDENSATUS / GIANT WILD RYE
	ELY CA2	ELYMUS CONDENSATUS `CANYON PRINCE` / CANYON PRINCE WILD RYE
	ERI WAY	ERIGERON GLAUCUS `WAYNE RODERICK` / SEASIDE DAISY
	IRI COA	IRIS DOUGLASIANA `PACIFIC COAST HYBRIDS` / PCH IRIS
	JUN PAT	JUNCUS PATENS / CALIFORNIA GRAY RUSH
	MUH RIG	MUHLENBERGIA RIGENS / DEER GRASS
	SIS BEL	SISYRINCHIUM BELLUM / BLUE EYED GRASS

GROUND COVERS	CODE	BOTANICAL NAME / COMMON NAME
	BAC POZ	BACCHARIS PILULARIS CONSANGUINEA `POZO SURF` / LOWLY COYOTE BRUSH
	CAR PAN	CAREX PANSA / SANDDUNE SEDGE
	CAR GRE	CARISSA MACROCARPA `GREEN CARPET` / GREEN CARPET NATAL PLUM
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	SES AUT	SESLERIA AUTUMNALIS / AUTUMN MOOR GRASS
	TUR SOD	TURF SOD / REPLACE DAMAGED TURF BY CONSTRUCTION

REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
1	CURB RAMP. PER CIVIL
2	CURB & GUTTER BY CIVIL
3	AREA DRAIN. PER CIVIL
4	RIGHT-OF-WAY
5	(E) TREE. PROTECT IN PLACE
6	FUTURE D.G. PATH & MOW CURB

REFERENCE NOTES SCHEDULE

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P-104	CRUSH STONE		SOUTHWEST BOULDERS	CRUSHED STONE	LOOSE GRAVEL	CALIFORNIA GOLD		1-3"	3" THK.
P-105	STEPPING STONE		STEPSTONE OR EQ.	CONCRETE	FACE MIX GRIND	MESA BUFF/DAVIS COLOR			

N

0 5' 10' 20'
1" = 10'

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

Underground Service Alert
Call: TOLL FREE
811
TWO WORKING DAYS BEFORE YOU DIG

WARNING:
BEFORE STARTING WORK ON EXISTING SERIES STREET LIGHTING CIRCUITS, CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM THE SERVING UTILITY. CUT-OUT PLUGS MUST BE PULLED AND "MEN AT WORK" SIGNS POSTED BEFORE ANY WORK IS DONE OR CONNECTIONS MADE.

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185 S. Myers St., Los Angeles, CA 90033
www.mlagreen.com

LICENSED LANDSCAPE ARCHITECT
ROBERT P. HUTCHINGS
Signature
5/30/17
Renewal Date
5/26/16
Date
STATE OF CALIFORNIA

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION
PLANTING PLAN SLP-2.08
WILSHIRE BOULEVARD TO DOHENY DRIVE

SCALE AS SHOWN

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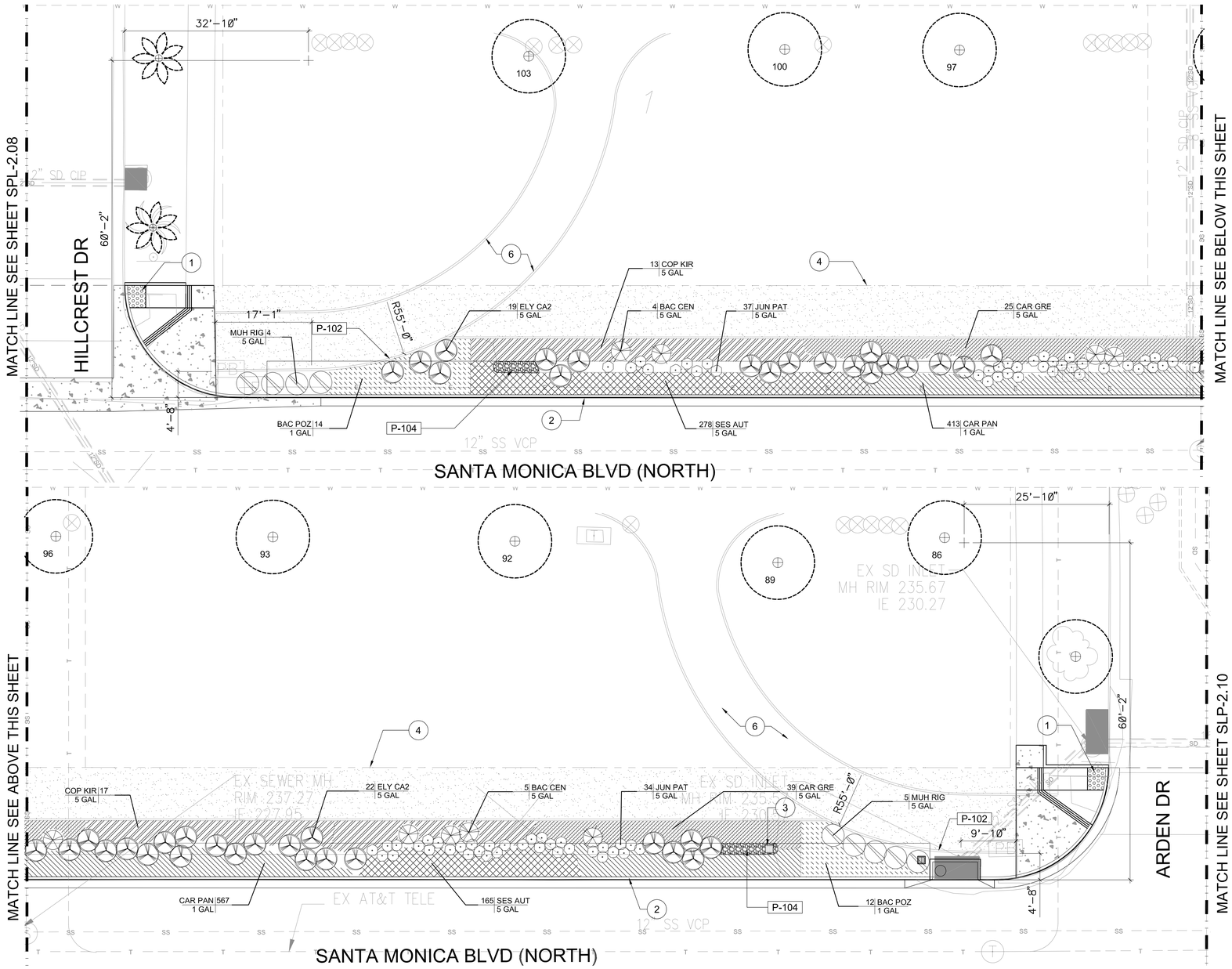
DESIGNED	DATE	
DRAWN	DATE	
CHECKED	DATE	

DATE	REVISION	BY
5/20	ADDENDUM 2	

SUBMITTED _____ DATE _____
APPROVED _____ DATE _____

JOB NO. 2184
DRAWING NO. 7449
SHEET 23 OF 27 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT



PLANT SCHEDULE

SHRUBS	CODE	BOTANICAL NAME / COMMON NAME
	BAC CEN	BACCHARIS X `CENTENNIAL` / CENTENNIAL COYOTE BRUSH
	ELY CON	ELYMUS CONDENSATUS / GIANT WILD RYE
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	IRI COA	IRIS DOUGLASIANA `PACIFIC COAST HYBRIDS` / PCH IRIS
	JUN PAT	JUNCUS PATENS / CALIFORNIA GRAY RUSH
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REFERENCE NOTES SCHEDULE

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www.mlagreen.com

LICENSED LANDSCAPE ARCHITECT
REY P. HUTCHING
Signature
5/20/17
Renewal Date
5/26/16
Date
STATE OF CALIFORNIA

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

PLANTING PLAN
SLP-2.09

WILSHIRE BOULEVARD TO DOHENY DRIVE

SCALE AS SHOWN			
F.B. NO.	PAGE	TO	
DESIGNED	DATE		
DRAWN	DATE		
CHECKED	DATE		
5/20	ADDENDUM 2		
DATE	REVISION	BY	

SUBMITTED _____ DATE _____

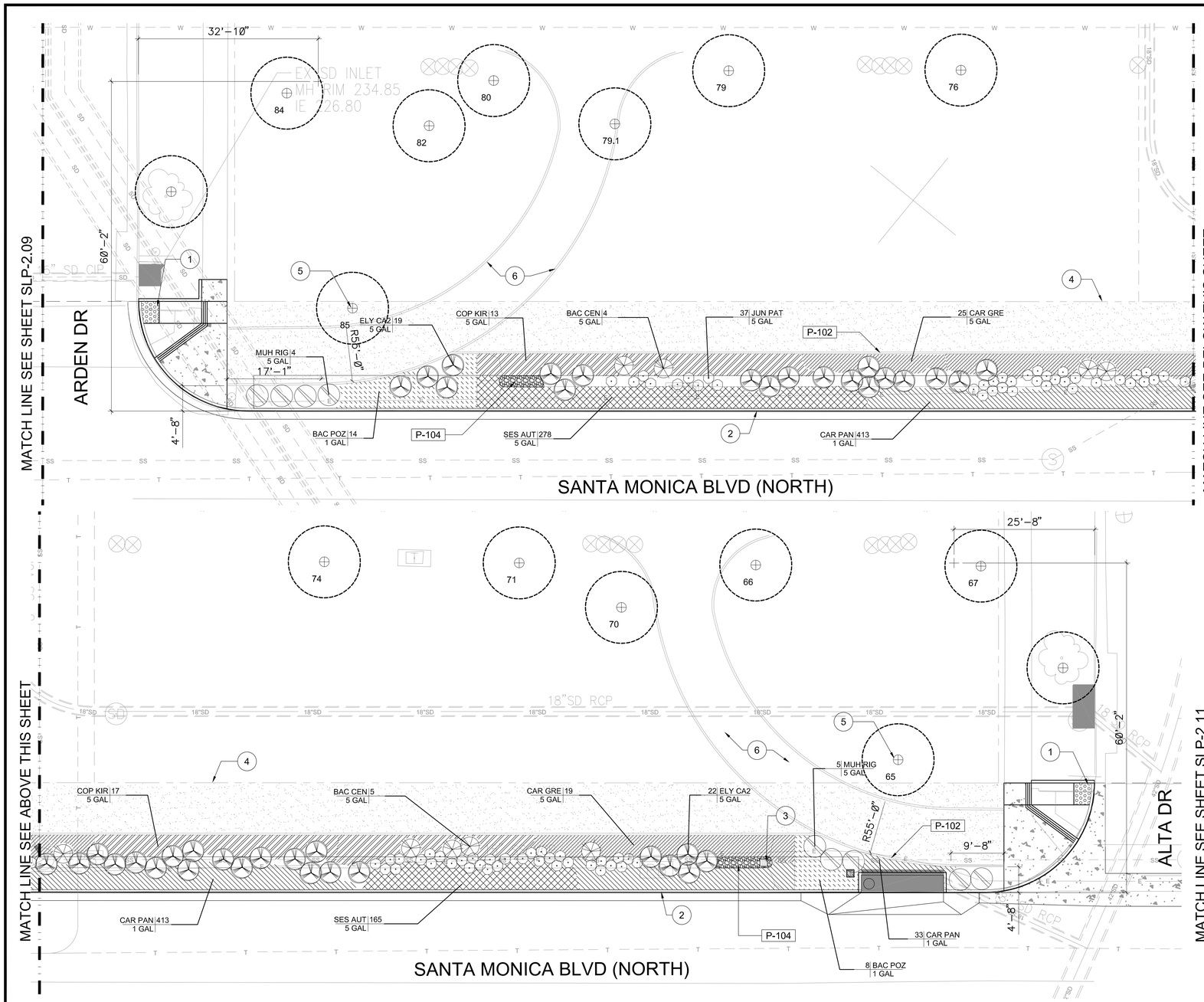
APPROVED _____ DATE _____

JOB NO. 2184

DRAWING NO. 7449

SHEET 24 OF 27 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT



PLANT SCHEDULE

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N
0 5' 10' 20'
1" = 10'

LICENSED LANDSCAPE ARCHITECT
REBY P. HUTCHINS 3887
Signature
5/20/17
Renewal Date
5/26/16
Date
STATE OF CALIFORNIA

SCALE AS SHOWN		
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CHECKED	DATE	
5/20	ADDENDUM 2	
DATE	REVISION	BY

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www.mlagreen.com

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

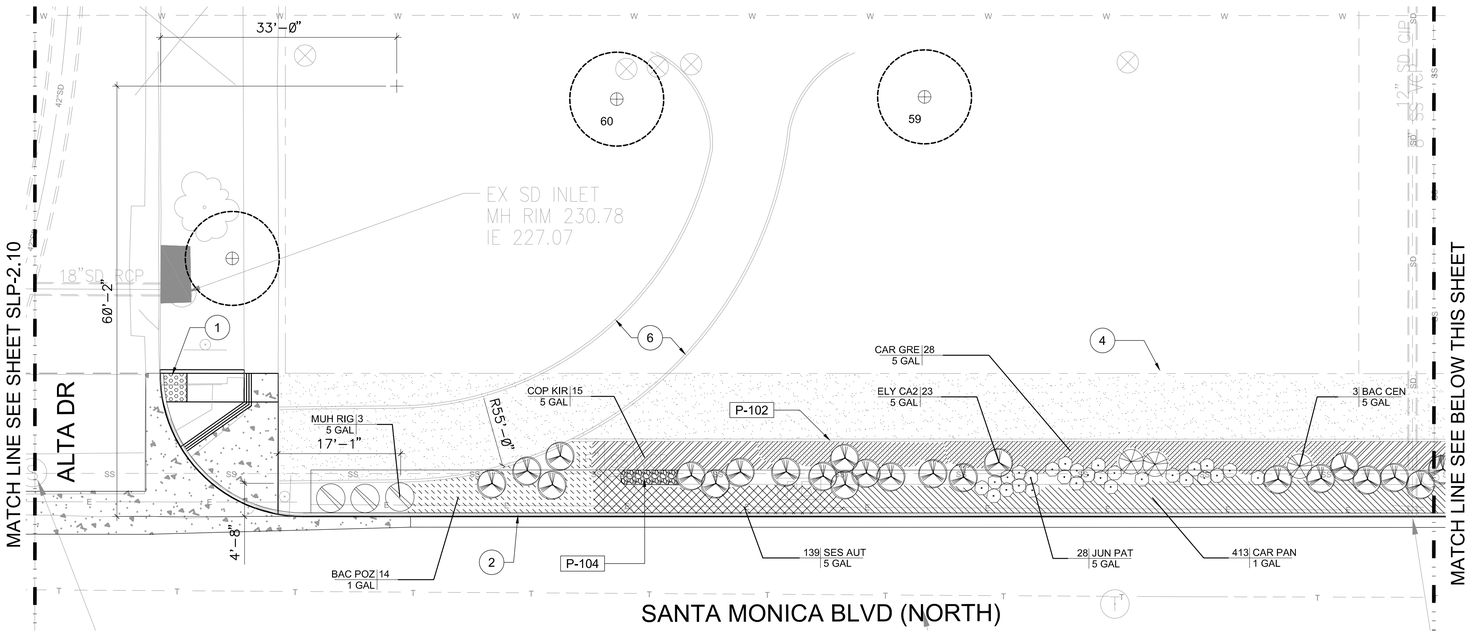
PLANTING PLAN
SLP-2.10

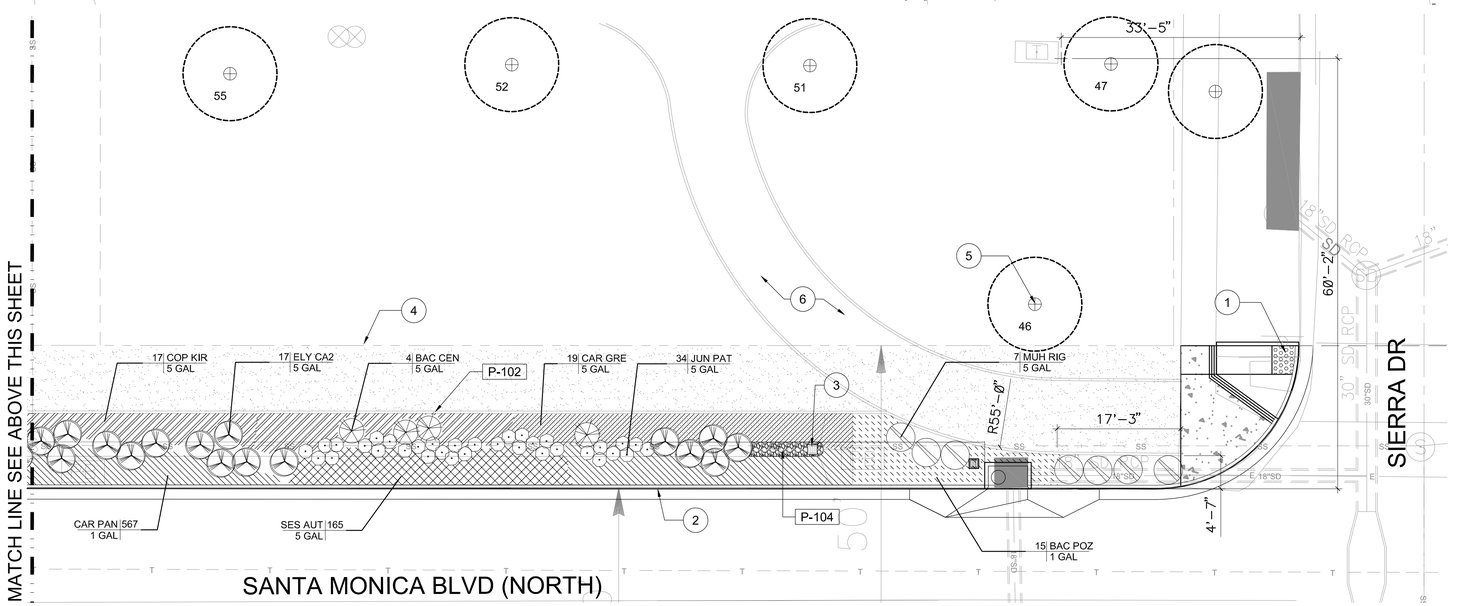
WILSHIRE BOULEVARD TO DOHENY DRIVE

SUBMITTED _____ DATE _____
APPROVED _____ DATE _____

JOB NO. 2184
DRAWING NO. 7449
SHEET 25 OF 27 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT





PLANT SCHEDULE

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LICENSED LANDSCAPE ARCHITECT
JEFFREY P. HUTCHINS 3898
Signature
5/20/17
Renewal Date
5/26/16
Date
STATE OF CALIFORNIA

SCALE AS SHOWN		
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CHECKED	DATE	
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DATE	REVISION	BY

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MIA LEHRER + ASSOCIATES
185 S. Myers St., Los Angeles, CA 90033
www.mlagreen.com

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

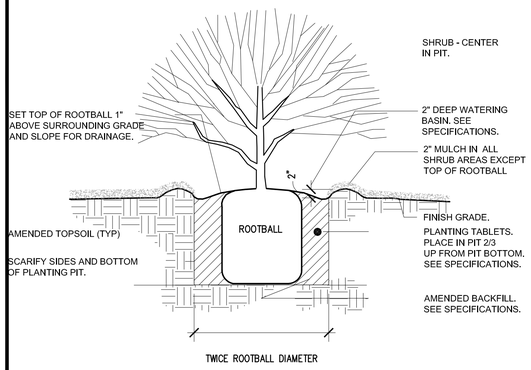
PLANTING PLAN
SLP-2.11

WILSHIRE BOULEVARD TO DOHENY DRIVE

SUBMITTED _____ DATE _____
APPROVED _____ DATE _____

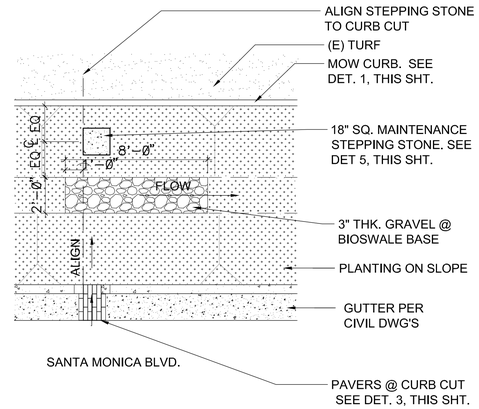
JOB NO. 2184
DRAWING NO. 7449
SHEET 26 OF 27 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT



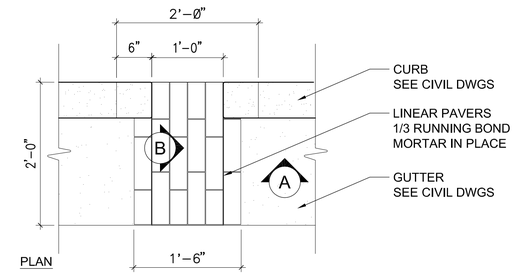
6 SHRUB PLANTING

N.T.S. P-SM1-329333-01

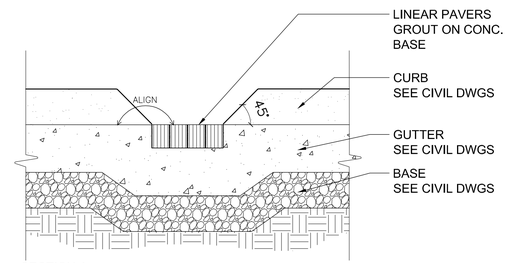


4 BIOSWALE TREATMENT @ CURB CUT, TYP.

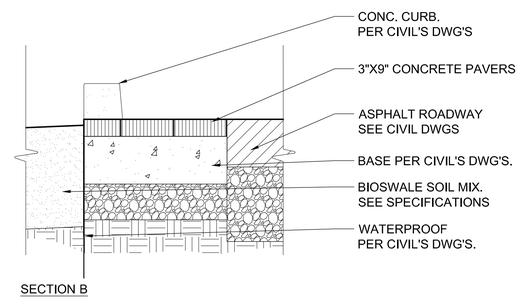
1/4" = 1'-0" P-SM1-321313-08



PLAN



SECTION A

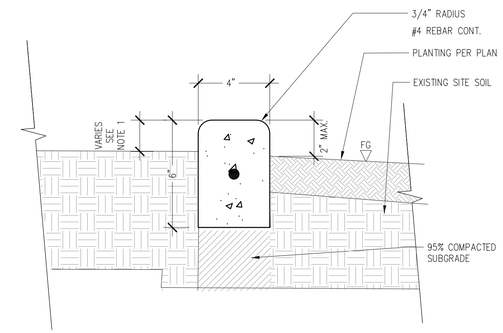


SECTION B

3 DECORATIVE PAVERS AT BIOSWALE CURB CUT

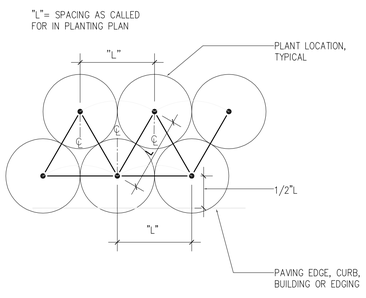
1" = 1'-0" P-SM1-321413-08

NOTES:
1. 2"MAXIMUM AT PLANTING, AND 1" MAXIMUM AT TURF AREA.
2. COLOR: MESA BUFF/DAVIS COLOR. FINISH: SMOOTH TROWEL PREMIUM FINISH.



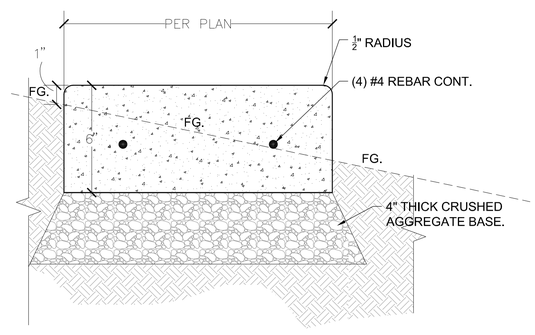
1 CONCRETE MOW CURB

3" = 1'-0"



7 TRIANGULAR SPACING

1" = 1'-0" P-SM1-329313-02



5 CONCRETE STEP AT SLOPE

3" = 1'-0" P-SM1-0330-1-15

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LICENSED LANDSCAPE ARCHITECT
JEFFREY P. HUTCHYNS
Signature
5/20/12
Renewal Date
5/26/16
Date
STATE OF CALIFORNIA

PROJECT:
NORTH SANTA MONICA BOULEVARD RECONSTRUCTION

PLANTING DETAILS SLP-2.12

WILSHIRE BOULEVARD TO DOHENY DRIVE

SCALE AS SHOWN		
F.B. NO.	PAGE	TO
DESIGNED	DATE	
DRAWN	DATE	
CHECKED	DATE	
5/20	ADDENDUM 2	
DATE	REVISION	BY

SUBMITTED _____ DATE _____
APPROVED _____ DATE _____

JOB NO. 2184
DRAWING NO. 7449
SHEET 27 OF 27 SHEET

CITY OF BEVERLY HILLS, CALIFORNIA
CIVIL ENGINEERING DEPARTMENT

City of Beverly Hills

455 N. Rexford Dr.
Beverly Hills, CA 90210

SPECIFICATIONS

Santa Monica Boulevard Improvements
Beverly Hills, CA

May 24, 2016

LANDSCAPE ARCHITECT:
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SECTION 015639

TEMPORARY TREE AND PLANT PROTECTION

PART 1 - GENERAL

1.1 SUMMARY

A. General: Section includes Temporary Tree and Plant Protection of existing trees and plants that are affected by the execution of the Work in accordance with Contract Documents.

B. Summary of Work: Provide all labor, equipment and materials required for the procurement, delivery and operations for temporary tree and plant protection as indicated on Drawings and as specified herein.

1. Section Includes:

a. Examination and preparation.
b. Protection of trees and plants.
c. Excavation.
d. Root pruning.
e. Crown pruning.
f. Re-grading.
g. Repair and replacement.

C. Related Sections:

1. Division 01 for Special Project Procedures.

2. Specification Section 329113 – Soil Preparation.

3. Specification Section 328400 – Irrigation.

4. Specification Section 329300 – Planting.

1.2 DEFINITIONS

A. Protection Zone: Area surrounding individual trees, groups of trees, shrubs, or other vegetation to be protected during construction, and defined by a circle concentric with each tree with a radius 1.5 times the diameter of the drip line unless otherwise indicated on Drawings.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Samples: For each type of organic mulch in sealed plastic bags labeled with composition of materials by percentage of weight, protection zone fencing and protection zone signage.

C. Tree Pruning Schedule: Written schedule detailing scope and extent of pruning of trees to remain that interfere with or are affected by construction.

D. Certification: From Certified Arborist, certifying that trees indicated to remain have been protected during construction according to recognized standards and that trees were promptly and properly treated and repaired when damaged.

E. Maintenance Recommendations: From Certified Arborist, for care and protection of trees affected by construction during and after completing the Work.

F. Existing Conditions: Documentation of existing trees and plantings indicated to remain, which establishes pre-construction conditions that might be misconstrued as damage caused by construction activities.

1.4 QUALITY ASSURANCE

A. Tree-Service Firm Qualifications: An experienced landscape contractor or tree-moving firm that has successfully completed transplanting work similar to that required for this Project and that will assign an experienced and qualified Certified Arborist to Project during execution of the Work.

1. Certified Arborist Qualifications: Certified Arborist as certified by ISA and approved by the City of Beverly Hills.

B. Pre-Installation Conference: Conduct conference at Project Site.

C. Follow the City of Beverly Hills Protecting City Parkway Street Trees during Private Property Construction specifications.

1.5 PROJECT CONDITIONS

A. The following practices are prohibited within protection zones:

1. Storage of construction materials, debris, or excavated material.

2. Parking vehicles or equipment.

3. Foot traffic.

4. Erection of sheds or structures.

5. Impoundment of water.

6. Excavation or digging unless otherwise indicated on Drawings.

7. Attachment of signs to trees or plants unless otherwise indicated on Drawings.

8. Wrapping materials around trees or plants unless otherwise indicated on Drawings.

B. Do not direct vehicle or equipment exhaust toward protection zones.

C. Prohibit heat sources, flames, ignition sources, and smoking within or near protection zones and organic mulch.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Topsoil: Natural or cultivated top layer of the soil profile or manufactured topsoil; containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; free of subsoil, clay lumps, gravel, and other objects more than 1 inch (25 mm) in diameter; and free of weeds, roots, and toxic and other non-soil materials.

B. Protection Zone Fencing: Fencing fixed in position and meeting one of the following requirements. Previously used materials may be used when approved by Landscape Architect.

1. Chain Link Protection Zone Fencing: Galvanized steel fencing fabricated from minimum 2-inch (50-mm) opening, 0.148-inch (3.76-mm) diameter wire chain link fabric; with pipe posts, minimum 2-3/8-inch- (60-mm) outside dimension line posts, and 2-7/8-inch- (73-mm-) outside dimension corner and pull posts; with 1-5/8-inch (42-mm) outside dimension top rails and 0.177-inch (4.5-mm) diameter bottom tension wire; with tie wires, hog ring ties, and other accessories for a complete fence system.

2. Plastic Protection Zone Fencing: Plastic construction fencing constructed of high-density extruded and stretched polyethylene fabric with 2-inch (50-mm) maximum opening in pattern and supported by tubular or T-shape galvanized steel posts spaced not more than 8 feet (2.4 m) apart. High-visibility orange color, non-fading.

3. Height of Fencing: 4 feet (1.2 m)

4. Gates: Swing access gates matching material and appearance of fencing, to allow for maintenance activities within protection zones.

C. Protection Zone Signage: Shop-fabricated, rigid plastic or metal sheet with attachment holes pre-punched and reinforced; legibly printed with non-fading lettering, no less than 8.5 x 11 inches.

PART 3 - EXECUTION

3.1 EXAMINATION AND PREPARATION

A. Erosion and Sedimentation Control: Examine the site to verify that temporary erosion- and sedimentation-control measures are in place. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.

B. Protect tree root systems from damage caused by runoff or spillage of noxious materials while mixing, placing, or storing construction materials. Protect root systems from ponding, eroding, or excessive wetting caused by dewatering operations.

C. Protection Zones: Mulch areas inside protection zones and other areas indicated with 4-inch (100-mm) average thickness of organic mulch. Do not place mulch within 6 inches (150 mm) of tree trunks.

3.2 PROTECTION ZONES

A. Protection Zone Fencing: Install protection zone fencing along edges of protection zones in a manner that will prevent people from easily entering protected area except by entrance gates.

1. Chain Link Fencing: Install to comply with ASTM F 567 and with manufacturer's written instructions.

2. Posts: Set or drive posts into ground one-third the total height of the fence without concrete footings. Where a post is located on existing paving or concrete to remain, provide appropriate means of post support acceptable to Landscape Architect.

B. Protection Zone Signage: Install protection zone signage in visibly prominent locations in a manner approved by Landscape Architect.

C. Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations, in a manner approved by Landscape Architect.

D. Maintain protection zone fencing and signage in good condition as acceptable to Landscape Architect and remove when construction operations are complete and equipment has been removed from the site.

3.3 EXCAVATION

A. General: Excavate at edge of protection zones and for trenches indicated within protection zones according to requirements in Specification Section 312000 – Earth Moving.

B. Trenching near Trees: Where utility trenches are required within protection zones, hand excavate under or around tree roots or tunnel under the roots by drilling, auger boring, or pipe jacking. Do not cut main lateral tree roots or taproots; cut only smaller roots that interfere with installation of utilities.

C. Do not allow exposed roots to dry out before placing permanent backfill.

3.4 ROOT PRUNING

A. Prune roots that are affected by temporary and permanent construction only after review with city arborist or assignee by the City.

1. Perform root pruning under direction of Certified Arborist.

2. Cut roots manually by digging a trench and cutting exposed roots with sharp pruning instruments; do not break, tear, chop, or slant the cuts. Do not use a backhoe or other equipment that rips, tears, or pulls roots.

3. Temporarily support and protect roots from damage until they are permanently covered with soil.

4. Cover exposed roots with burlap and water regularly.

5. Backfill as soon as possible according to requirements in Specification Section 312000 – Earth Moving.

B. Root Pruning at Edge of Protection Zone: Prune roots by cleanly cutting all roots to the depth of the required excavation.

C. Root Pruning within Protection Zone: Clear and excavate by hand to the depth of the required excavation to minimize damage to root systems. Use narrow-tine spading forks, comb soil to expose roots, and cleanly cut roots as close to excavation as possible.

3.5 CROWN PRUNING

A. Prune branches that are affected by temporary and permanent construction only after review with project landscape architect

1. Perform crown pruning under direction of Certified Arborist.

2. Prune trees to remain to compensate for root loss caused by damaging or cutting root system. Provide subsequent maintenance during Contract period as recommended by Certified Arborist.

3. Pruning Standards: Prune trees according to ANSI A300 (Part 1).

4. Cut branches with sharp pruning instruments; do not break or chop.

5. Do not apply pruning paint to wounds.

3.6 RE-GRADING

A. Lowering Grade: Where new finish grade is indicated below existing grade around trees, slope grade beyond the protection zone. Maintain existing grades within the protection zone.

B. Raising Grade: Where new finish grade is indicated above existing grade around trees, slope grade beyond the protection zone. Maintain existing grades within the protection zone.

C. Minor Fill within Protection Zone: Where existing grade is 2 inches (50 mm) or less below elevation of finish grade, fill with topsoil. Place topsoil in a single uncompacted layer and hand grade to required finish elevations.

3.7 FIELD QUALITY CONTROL

A. Inspections: Engage a Certified Arborist to direct plant protection measures in the vicinity of trees, shrubs, and other vegetation indicated to remain and to prepare inspection reports.

3.8 REPAIR AND REPLACEMENT

A. General: Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations, in a manner approved by Landscape Architect.

1. Have Certified Arborist perform the root cutting, branch pruning, and damage repair of trees and shrubs.

2. Treat damaged trunks, limbs, and roots according to Certified Arborist's written instructions.

3. Perform repairs within 24 hours.

4. Replace vegetation that cannot be repaired and restored to full-growth status, as determined by Landscape Architect.

3.9 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Disposal: Remove excess excavated material, displaced trees, trash and debris, and legally dispose of them off Owner's property.

END OF SECTION 015639

SECTION 320190

LANDSCAPE MAINTENANCE

PART 1 - GENERAL

1.1 SUMMARY

A. General: Provide Landscape Maintenance in accordance with Contract Documents.

B. Summary of Work: Provide all labor, equipment and materials required to provide Landscape Maintenance, complete, as indicated on Drawings and as specified herein.

1. This Section includes Landscape Maintenance as specified during progress of the work, after installation and for a period of 90 days after Substantial Completion.

C. Related Documents:

1. Division 01 for Special Project Procedures.

2. Specification Section 328400 – Irrigation.

3. Specification Section 329113 – Soil Preparation.

4. Specification Section 329300 – Planting

5. Specification Section 329600 – Transplanting.

1.2 SUBMITTALS

A. Quality Control Submittals:

1. Schedule of maintenance operations and monthly status reports including list of equipment, proposed materials for the job and watering schedule.

2. Licenses, permits and insurance that pertain to maintenance work as required by City, State or Federal government agencies.

3. Monthly record of all herbicides, insecticides and disease control chemicals used for the project.

B. Project Close-Out Submittal: Include in a single, 3-ring binder a Landscape Maintenance Manual containing an indexed collection of all schedules, records and permits listed above, as well as a documentation of accepted condition of planting and irrigation at Final Acceptance.

1.3 QUALITY ASSURANCE

A. Qualifications:

1. Experience: The Landscape Contractor or Maintenance Contractor shall have a full-time employee assigned to the job as foreman for the duration of the contract. He/she shall have a minimum of 4 years experience in landscape maintenance supervision, with experience or training in turf management, entomology, pest control, soils, fertilizers and plant identification.

2. Labor Force: The landscape maintenance labor force shall be thoroughly familiar with and trained in the work to be accomplished and shall perform all tasks in a competent and efficient manner acceptable to Landscape Architect and Owner.

B. Requirements:

1. Supervision: The foreman shall directly supervise the labor force at all times. Immediately notify Landscape Architect Owner of all changes in supervision.

2. Identification: Provide proper identification at all times for landscape maintenance firm's vehicles and labor force. The labor force shall be uniformly dressed in a manner satisfactory to Owner.

1.4 PROJECT/SITE CONDITIONS

A. Site Visit: At the beginning of Maintenance Period visit and walk the site with Landscape Architect to clarify scope of work and understand existing project and site conditions.

B. Documentation of Conditions: Document general condition of existing trees, shrubs, vines, ground covers and lawn, recording all plant materials that are healthy, thriving, damaged, dead or dying.

C. Irrigation System: Document general condition of existing irrigation system, making sure that faulty electrical controllers, broken or inoperable sprinkler heads and emitters are reported.

1.5 SEQUENCING AND SCHEDULING

A. Perform all maintenance during hours mutually agreed upon between Owner and Contractor.

B. Work force shall be present at the Project Site daily, Monday through Friday, and as often as necessary to perform specified maintenance in accordance with the approved maintenance schedule.

1.6 WARRANTY

A. Specific Requirements: Refer to the following Specification Sections.

1. Specification Section 328400 – Irrigation.

2. Specification Section 329100 – Soil Preparation.

3. Specification Section 329300 – Planting.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: All materials and equipment shall be provided by Contractor except as specified below.

B. Water: Clean and potable, as available from Owner. Transport as required.

C. Fertilizers:

1. Tightly compressed slow-release and long lasting complete fertilizer tablets bearing manufacturer's label of guaranteed analysis of chemicals present.

2. Balanced, once-a-season application, controlled-release fertilizers with a blend of coated pills which supply controlled-release nitrogen, phosphorus and potassium, and uncoated, rapidly soluble pills containing nitrogen and phosphorus.

D. Herbicides, Insecticides, and Fungicides:

1. Best quality materials with original manufacturers' containers, properly labeled with guaranteed analysis.

2. Use non-staining materials.

E. Annuals/Perennials: Nursery grown in 6-inch pots, full, and healthy.

1. Flowering plants just ready to bloom.

2. Grasses at mature height.

F. Lawn Sod for Re-Sodding: Match existing sodded lawn.

G. Replacement Tree Staking and Guying Material: Match originally accepted existing materials on the site.

2.2 EQUIPMENT

A. General: Use only the proper tool for each job. Maintain all tools in sharp and properly functioning condition. Clean and sterilize pruning tools prior to usage.

B. Insect/Disease Prevention: Take all measures to prevent introduction of insect or disease-laden materials onto the site.

PART 3 - EXECUTION

3.1 ESTABLISHING THE MAINTENANCE PERIOD

A. Preliminary Review: As soon as planting is substantially complete in accordance with Drawings and Specifications hold a preliminary review to determine the condition of the work.

B. Date of Review: Notify Landscape Architect at least 5 working days prior to the anticipated date of review.

C. Beginning of Maintenance Period: The date on which Landscape Architect issues a Letter of Substantial Completion to Contractor.

3.2 PREPARATION

A. Protection:

1. Protect all new planting areas from damage of all kinds from commencement of work until sufficiently established or until Final Acceptance.

2. Provide temporary protection fences, barriers and signs as required for protection.

B. Replacements:

1. Immediately treat or replace all plants that become damaged or injured as a result of Contractor's operations or negligence as directed by Landscape Architect and at no cost to Owner.

2. Replacement plants shall match size, condition and variety of plants to be replaced.

3.3 PLANTING

A. Watering Basins:

1. Maintain all watering basins around plants so that enough water can be applied to establish moisture through major root zones.

2. For supplemental hand watering of watering basins use a water wand to break the water force.

   a. Do not use "jet" type watering equipment.
   b. Do not permit crown roots to become exposed to air due to dislodging of soil and mulch.

3. Maintain originally specified depth of mulch to reduce evaporation and frequency of watering.

4. During the rainy season open basins to allow surface drainage away from the root crowns where excess water may accumulate. Restore watering basins at the end of the rainy season.

5. At the end of the rainy season re-form watering basins at trees and shrubs as indicated on Drawings.

B. Resetting:

1. Reset plants to proper grades and upright position.

C. Weed Control:

1. All areas between plants including watering basins shall be weed free at all times.

2. Use only recommended and legally approved herbicides to control weed growth.

3. Avoid frequent soil cultivation that destroys shallow roots and breaks the seal of pre-emergent herbicides.

D. Pruning:

1. All pruning operations shall be directed and supervised by a Certified Arborist.

2. Prune trees to select and develop permanent scaffold branches that are smaller in diameter than the trunk or branch to which they are attached and which have a vertical spacing of 18 inches to 48 inches and a radial orientation so as not to overlay one another.

3. Prune trees to eliminate diseased or damaged growth and narrow V-shaped branch forks that lack strength. Reduce toppling and wind damage by thinning crowns.

4. Prune trees to maintain growth within space limitations, maintaining a natural appearance and balancing crown with roots.

5. Stripping of lower branches ("raising up") of young trees is not permitted.

6. Retain lower branches in a "tipped back" or pinched condition to promote caliper trunk growth (tapered trunk). Do not cut back to fewer than 6 buds or leaves on such branches. Only cut lower branches flush with the trunk after the tree is able to stand erect without staking or other support.

7. Thin and shape evergreen trees when necessary to prevent wind and storm damage. Do primary pruning of deciduous trees during the dormant season. Do not permit any pruning of trees prone to excessive "bleeding" during growth season.

8. As necessary, prune damaged trees or those that constitute health or safety hazards at any time of year.

9. Make all cuts clean and close to the trunk, without cutting into the branch collar. "Stubbing" is not permitted. Cut smaller branches flush with trunk or lateral branch. Make larger cuts (1-inch diameter or larger) parallel to shoulder rings, with the top edge of the cut at the trunk or lateral branch.

10. Branches too heavy to handle shall be precut in 3 stages to prevent splitting or peeling of bark. Make the first 2 cuts 18 inches or more from the trunk to remove the branch. Make the third cut at the trunk to remove the resulting stub.

11. Do not prune or clip shrubs into balled or boxed forms unless specifically required by the design as indicated on Drawings.

12. Clip shrubs to be hedged when branches project 2 inches beyond limit of clipped hedge indicated on Drawings.

13. Take extreme care to avoid transmitting disease from an infected plant to other plants. Properly sterilize pruning tools before going from an infected plant to all other plants.

E. Staking and Guying of Trees:

1. Inspect stakes and guys at least once a month to check for rubbing that causes bark wounds.

2. Repair and replace staking and guying as indicated on Drawings and as specified in Specification Section 329300 – Plants.

3. Stake height shall be adjusted so that stakes do not interfere with lower canopy branches.

F. Maintenance of Existing Plants to Remain:

1. General: Conform to all applicable paragraphs regarding pruning, watering, spraying and fertilizing of new plant materials as specified in this section.

2. Symptoms: Be alert to symptoms of construction damage to existing plants as evidenced by wilting, unseasonal or early flowering, loss of leaves and insect or disease infestation due to declining vigor.

3. Notification: Immediately submit in writing evidence of declining vigor upon discerning the problem. Take appropriate interim measures to mitigate the severity of the problem as specified herein.

4. Proposal: Submit written proposal and cost estimate for the correction of all conditions before proceeding with correction work.

3.4 GROUND COVER

A. Watering:

1. Check for moisture penetration throughout the root zone at least twice a month.

2. Water as frequently as necessary to maintain healthy growth of ground cover.

B. Weed Control:

1. Control weeds, preferably with pre-emergent herbicides and with selective systemic herbicides.

2. Minimize hoeing of weeds in order to avoid plant damage.

3. Glyphosate based formulations shall not be used.

C. Fertilization:

1. Recently Installed Plant Materials: Verify with Landscape Architect actual completion date of planting installation and rate of prior application of fertilizers.

2. New Plant Materials: Place one 5-gram tablet (20-10-5; N-P-K) beside the root ball about 1 inch from root tips.

3. Established Plant Materials: Do not use complete fertilizers unless soil test shows specific nutrient deficiencies.

4. Glyphosate based formulations shall not be used.

D. Mowing and Edging:

1. Edge ground cover to keep in bounds. Trim top growth as necessary to achieve an overall even appearance.

2. Ground cover species that lend themselves to mowing shall be mowed to the specified height above finish grade in order to renew growth, improve density and attractiveness.

E. Replacements:

1. Replace dead and missing plants after obtaining Owner's agreement to pay for replacement.

2. Damages due to Contractor's negligence shall be corrected without charge to Owner.

3.5 LAWNS

A. Watering:

1. Water lawns at such frequency as weather conditions require to replenish soil moisture to a 6-inch depth below root zone.

2. During hot weather provide a total of 1-1/2 inches of water weekly in 3 applications per week.

3. Water at night if irrigation system is electrically controlled. Otherwise, watering shall be done during early morning hours.

B. Weed Control:

1. Control broadleaf weed with selective herbicides.

2. In areas where crabgrass has infested the lawn apply a selective post-emergent herbicide as soon as possible and prior to flowering.

3. Apply pre-emergent herbicides such as Dacthal, Balan, or Betasan prior to crabgrass germination.

4. Do not irrigate for 48 hours after application of herbicidal sprays.

5. Coordinate application of herbicides with thatch control and reseeding schedule as described in Paragraph E below.

6. Glyphosate based formulations shall not be used.

C. Mowing and Edging:

1. Mow lawns when they reach a 2-inch height.

2. Trim edges at least twice a month or as needed for neat appearance. Vacuum clippings.

D. Reseeding of Lawn Areas: Match existing seed mix of adjacent areas.

E. Renovation of Existing Lawns:

1. Thatch Control: Maintain thatch layer at a 1/2-inch depth or less. Verticut as required.

   a. 3 weeks before verticutting lawn, apply nitrate fertilizers.
   b. Perform verticutting operations, preferably in Fall, but otherwise in Spring.
   c. Remove all debris from verticutting. Over-seed as needed.
   d. Over-seeding must not be followed by application of pre-emergent herbicides for 4 to 6 weeks. Normally this means that lawns invaded by weeds shall be renovated and over-seeded in fall, followed by weed control treatment during late winter.

2. Aeration:

   a. Do not perform aeration work during season of active weed germination.
   b. Aerate compacted areas to improve water penetration when needed, using a piston-driven aerator with hollow tines.
   c. Rake and remove all resulting soil cores.
   d. Fertilize and irrigate immediately after cleanup of cores.

F. Fertilizers:

1. Recently Seeded/Sodded Lawn Areas: Verify previous applications of fertilizer(s).

2. Established Lawn Areas: Apply a slow release (3 to 5 months) fertilizer (21-8-8; N-P-K) once in Spring and once in Fall at the following rates:

Program	1000 Sq. Ft.	Acre
Optimum	15 lbs.	650 lbs.
Medium	12 lbs.	500 lbs.
Low	8 lbs.	350 lbs.

3. Apply fertilizer when grass is dry and preferably after mowing. Do not apply during hot weather or when grass is under stress. Water immediately after application.

4. Apply only nitrogen unless a soil test shows a specific nutrient deficiency.

5. If soil pH falls below 6.0, then a basic fertilizer such as calcium nitrate may be preferable to an acidic fertilizer. Follow the recommendations of the soil testing agency Wallace Laboratories, (310) 615-0116.

3.6 GRASSES

A. Watering:

1. Water grasses at such frequency as weather conditions require to replenish soil moisture to a 6-inch depth below root zone.

B. Weed Control:

1. All weed control shall be performed by hand. All grass areas shall be kept weed free.

C. Mowing and Edging:

1. Mow grasses during Maintenance Period as required

2. Trim turf edges at concrete walks.

3. Trim edges of stone and/or concrete steppers as required to enable pedestrian use of steppers. Vacuum clippings. Consult with Landscape Architect prior to performing this work.

D. Replanting of Grass Areas: Match existing grasses in adjacent areas. Plant from 6-inch pots.

E. Fertilizers:

1. Apply fertilizer as recommended by soil testing agency Wallace Laboratories, (310) 615-0116.

3.7 PLANTERS AND PORTABLE POTS

A. Watering:

1. Hand water all planters and portable pots that do not have an automatic irrigation system.

2. Species, sizes of plants, container sizes and orientation shall dictate frequency of watering. Submit to Landscape Architect a watering schedule for different seasonal requirements.

B. Weed Control: All planters and portable pots shall be kept weed free.

C. Pruning:

1. Limit pruning to the removal of damaged or dead twigs and foliage.

2. Remove spent flowers on a weekly basis.

D. Replacement of Annuals:

1. Replace annuals when materials exhibit a "spent" condition.

2. Thoroughly cultivate soil after removal of "spent" or "dead" plants prior to planting new materials.

E. Fertilization: Incorporate slow release fertilizers per manufacturer's current specifications and rake smooth.

3.8 INSECTS, PESTS, AND DISEASE CONTROL

A. Inspection: Inspect all plant materials for signs of stress, damage and potential trouble from the following:

1. Presence of insects, moles, gophers, ground squirrels, snails and slugs in planting areas.

2. Discolored or blotched leaves or needles.

3. Unusually light green or yellowish green color that is inconsistent with the normal green color of leaves.

B. Personnel: Only licensed, qualified, trained personnel shall perform spraying for insect, pest and disease control.

C. Application: Spray with extreme care to avoid all hazards to any person or pet within the area or adjacent areas.

3.9 IRRIGATION SYSTEM

A. General:

1. Repair without additional charge to Owner all damages to system caused by Contractor's operations. Perform all repairs within 1 watering period.

2. Report promptly to Landscape Architect and Owner all damage not caused by Contractor's negligence or operations.

3. Do not run the irrigation system during rainy conditions. Set and program automatic controllers for seasonal water requirements.

4. Twice a month, use a probe or other acceptable tool to check the root ball moisture of representative plants as well as the surrounding soil.

B. Cleaning and Monitoring the System:

1. Continually monitor the irrigation system to verify that it is functioning properly and as designed. Adjust irrigation scheduling program as necessary due to changing field and seasonal climate conditions.

2. Clean pump filter and strainer at least once a year and as often as necessary to keep the irrigation system free of sand and other debris.

3. Prevent spraying on windows and building walls by balancing the throttle control on the remote control valves and the adjustment screws on the sprinkler heads.

4. Do not allow water to atomize and drift.

3.10 TERMINATION OF THE MAINTENANCE PERIOD

A. Final Acceptance Procedure:

1. Work will be accepted by Landscape Architect upon satisfactory completion of all work, including Maintenance Period, but exclusive of replacement of materials under the Warranty Period.

2. Submit a written request to Landscape Architect for Final Acceptance Review at least 5 working days prior to the anticipated Final Acceptance Review date, which is to be at the end of the Maintenance Period.

B. Corrective Work:

1. Work requiring corrective action or replacement shall be performed within 10 calendar days after the Final Review.

2. Replace materials and perform corrective work in accordance with Drawings and Specifications. Contractor shall perform this work at no cost to Owner.

3. After corrective work is completed, Contractor shall again request a Final Acceptance Review and follow the procedure described above.

4. Continue to maintain all landscaped areas until such time as all corrective measures have been completed and accepted by Landscape Architect.

C. Conditions for Acceptance of Work at End of Maintenance Period:

1. Each plant shall be alive and thriving, showing signs of growth and no signs of stress, disease, or any other weaknesses.

2. Replace all plants that do not meet these conditions. An additional Warranty Period equal in length to the original shall be commenced for all such plants and planted areas.

D. Final Acceptance Date: The date on which Landscape Architect issues a Letter of Final Acceptance. Upon Final Acceptance, Owner will assume responsibility for maintenance of the work.

3.11 CLEANING

A. Dispose of all pruned materials, vacuum all lawn clippings and leaves, sweep all walkways and rake smooth all mulched areas.

B. Remove from site and legally dispose of evidence of maintenance activities including excess subsoil, unsuitable soil, all containers, trash and debris off of Owner’s property at Contractor's cost.

3.12 CLOSE OUT

A. Landscape Maintenance Record: Submit to Owner a binder with all documentation and records required and utilized during the Maintenance Period.

B. Keys and Identification: Return all keys and identification materials supplied by Owner for the purpose of site access.

END OF SECTION 320190

SECTION 321313

SITE CONCRETE WORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SECTION INCLUDES

A. Site concrete work, including subgrade preparation, formwork, reinforcing steel, concrete, and accessory materials for:

1. Mow strips, stepping stone and curbs.
2. Other site concrete work as indicated on Drawings.

1.3 RELATED WORK SPECIFIED ELSEWHERE

A. Geotechnical Report.

B. Division 31 Section “Site Clearing”.

C. Division 31 Section "Grading".

D. Precast concrete and other use concrete specified as part of Division 22, Division 23 and Division 26.

1.4 DEFINITIONS

A. Slip resistance: Slip index of not less than 0.5 when tested dry and wet (with an unbroken film of pure water) in accord with ASTM F 1677 or ASTM F 1679, using a Neolite test pad.

1.5 QUALITY ASSURANCE

A. Geotechnical data: Refer to Geotechnical Report.

B. Tests and inspections:

1. Testing laboratory services: Refer to Division 01 Sections.
2. Soil bearing and compaction:

a. Test methods:

1) Maximum dry density of backfill materials shall be determined by ASTM D 1557, Procedure A.

2) Field density tests shall be determined by ASTM D 1556, ASTM D 2922, or ASTM D 2937.

b. Required inspections:

1) Excavation inspection: Detailed inspection of exposed excavations prior to placing concrete.

3. Concrete: In accord with SSPWC Section 201-1.1.4 and as specified herein.

a. Portland cement: Furnish cement mill test reports and manufacturer's certification that cement complies with specification requirements.
b. Required tests:

1) Aggregate:

a) Hardrock aggregate: Test in accord with ASTM C 33.
b) Do not deliver aggregates to site or ready-mix plant until pit source has been approved, and plant, capacity, and ability to produce a uniform and continuous product has been verified.
c) Take samples from aggregate stockpiles assigned to project.

2) Slump tests: Make one slump test in accord with ASTM C 143 for each set of test cylinders: Make additional tests as may be ordered by Owner.

a) Make and keep an accurate record of all tests.
b) Maximum slumps: As specified hereinafter.

3) Test cylinders: Take one sample of four cylinders from each day's placement of each mix design in accord with ASTM C 172. Take samples at evenly spaced intervals as concrete is deposited in forms. Mark cylinders with date, sample number, and location in structure from which sample was taken. Do not take more than one sample of four cylinders from any location or batch of concrete.

a) Make and store cylinders in accord with ASTM C 31.
b) Curing: At the end of 24 hours, take cylinders to laboratory and store under moist curing conditions at approximately 70°F until tested.
c) Testing: Test cylinders in accord with ASTM C 39. Test one cylinder at age of 7 days for information and two cylinders at 28 days for acceptance. Maintain one cylinder in reserve.
d) Seven-day strength: Not less than 60 percent of specified ultimate 28-day strength.
e) Mix adjustment: Should test results indicate concrete strength below specified 7-day or 28-day minimum requirements, decrease water/cement ratio and adjust mix proportions as necessary to achieve specified minimum strengths.
f) Concrete failures: Should test results indicate that concrete strength requirements for any portion of work does not conform to 28-day minimum requirements, secure core or prism specimens of hardened concrete and test in accord with ACI 301 and ASTM C 42.
g) Laboratory shall secure and test specimens under Owner's direction.

c. Ready-mix plant inspections:

1) Testing laboratory shall provide and maintain continuous inspection at plant to check sieve analysis for quality and moisture content of aggregates, check mix with design mixes, check cement being used with test reports, check loading of mixer trucks, and certify quantities of materials loaded in each mixer truck.
2) Certification: Provide batch tickets signed by dispatcher and testing laboratory inspector at ready-mix plant. Each batch ticket shall state batch quantities of cement, water, fine aggregates, coarse aggregates, and admixture contained in each truck load.
3) Deliver to Owner's representative on job site a properly signed ticket with each load of ready-mix concrete.

4. Reinforcing steel:

a. Quality control of identifiable steel:

1) Submit laboratory copies of mill certificates for all types, sizes, and heats of reinforcing steel intended for use in the work. Include the following information:

a) Source of steel.
b) Description.
c) Heat number.
d) Yield point.
e) Ultimate tensile strength.
f) Elongation percentage in 8 in. length.
g) Bend test results.
h) Chemical analysis, including carbon equivalent (CE) of ASTM A 615 bars to be welded.

2) All costs in connection with tests and inspections of identifiable steel will be paid by Owner.

5. Payment:

a. Owner will pay all costs for all tests and inspections except retests and reinspections required because of failures.
b. All costs incurred for retests and reinspections required because of failure of original tests will be paid by Contractor.

C. Reference specifications and standards:

1. ACI: 301 Specifications for Structural Concrete for Buildings.
2. ACI: 305 Hot Weather Concreting.
3. ACI: 306 Cold Weather Concreting.
4. ASTM: A 370 Mechanical Testing of Steel Products.
5. ASTM: A 615 Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
6. ASTM: C 31 Making and Curing Concrete Test Specimens in the Field.
7. ASTM: C 33 Concrete Aggregates.
8. ASTM: C 39 Compressive Strength of Cylindrical Concrete Specimens.
9. ASTM: C 42 Drilled Cores and Sawed Beams of Concrete, Obtaining and Testing.
10. ASTM: C 143 Slump of Hydraulic Cement Concrete.
11. ASTM: C 172 Sampling Freshly Mixed Concrete.
12. ASTM: C 1107 Packaged Dry, Hydraulic-Cement Grout (Non-Shrink).
13. ASTM: D 1556 Density of Soil in Place by the Sand-Cone Method.

14. ASTM: D 1557 Moisture-Density Relations of Soils Using 10 lb. Rammer and 18 in. Drop.
15. ASTM: D 2922 Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
16. ASTM: D 2937 Density of Soil In-Place by the Drive-Cylinder Method.
17. ASTM: E 1155 Determining Floor Flatness and Levelness Using the F-Number System
18. ASTM: F 609 Using a Horizontal Pull Slipmeter (HPS).
19. ASTM: F 1677 Using a Portable Inclineable Articulated Strut Slip Tester, (PIAST).
20. ASTM: F 1679 Using a Variable Incidence Tribometer, (VIT).
21. SSPWC: Standard Specifications for Public Works Construction ("Green Book").

1.6 SUBMITTALS

A. Procedure: In accordance with Division 01 Sections.

B. Shop drawings: Plans, elevations, sections, and details, including layout of components and accessories. Indicate dimensions, clearances required, utility service requirements, materials, and finishes.

C. Manufacturer's detailed technical materials data, including technical bulletins, drawings, guides, and manuals, as applicable to the work of this Project, for the following:

1. Admixtures.
2. Curing materials.
3. Joint materials.
4. Waterstops.
5. Metallic aggregate topping.
6. Nonshrink grout, including test data.

D. Certifications:

1. Cement mill test reports and certification.
2. Admixture certification, including chloride ion content.
3. Ready-mix batch plant tickets.
4. Reinforcing steel mill certifications.
5. Reinforcing steel welder's certifications.

E. Concrete mix designs: Submit, for approval, certified concrete mix designs for initial and any subsequent changes in mix designs.

1.7 PROJECT CONDITIONS

A. Existing conditions:

1. Do not conceal or cover any work until required tests and inspections have been performed and accepted.
2. Do not fabricate items which require fitting to other building elements or into building spaces, until dimensions have been verified at the site.

B. Environmental requirements: Unless otherwise recommended by product or system manufacturer or reference specifications or standards, conform to the following:

1. Do not place concrete when the ambient temperature is 35°F or lower or is expected to go below that temperature within 24 hours.
2. Do not place concrete during rain that will cause surface damage to concrete.
3. Hot weather concreting procedures: In accord with ACI 305.
4. Cold weather concreting procedures: In accord with ACI 306.

C. Traffic control:

1. Maintain vehicular and pedestrian traffic control during concrete operations.
2. Provide flagmen, barricades, warning signs, and warning lights for movement of traffic and safety, and to cause the least interruption of work.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Concrete: In accord with SSPWC Section 201-1, Portland Cement Concrete, type as indicated on Drawings.

1. Cement: Conform to SSPWC Section 201-1.2.1.
2. Admixtures: Conform to SSPWC Section 201-1.2.4.
3. Fine aggregates: Conform to SSPWC Section 200 1.5.3
4. Coarse aggregates: Conform to SSPWC Section 200 1.4.
5. Design slumps and mix proportioning: SSPWC Sections 201-1.1.2 and 201-1.1.3 except as follows.

B. Formwork: Wood or equivalent metal, conforming to SSPWC Section 303-1.3.

C. Reinforcement: Conform to SSPWC Section 201-2.

D. Curing materials: Liquid or equivalent sheet membrane, conforming to SSPWC Section 201-4, except as specified herein.

E. Joint materials:

1. Construction joints: Preformed galvanized steel sheet or resawn wood.
2. Expansion joints: Premolded resilient filler, conforming to SSPWC Sections 201-3, except as specified herein.

F. Waterstops: Unless otherwise indicated on Drawings, provide extruded dumbbell type, spliced by thermal butt fusion.

G. Borrow material (for fill): Nonexpansive, predominantly granular material:

1. Particles less than 2 inches in any dimension;
2. Free of organic and inorganic debris;
3. Not more than 12 percemt by weight passing the No. 200 sieve.
4. Acceptable to a geotechnical engineer retained by Owner.

H. Non-shrink grout: Prepackaged, nonshrink, nonmetallic, natural aggregate grout conforming to ASTM C 1107, with minimum 28-day compressive strength of 5000 psi.

1. Hi-Flow or NS Grout by Euclid Chemical Company.

2. Five Star Grout by Five Star Products.
3. Master Flo 713 or 928 by Master Builders, Inc.

I. Integral mineral coloring pigments: Provide pure synthetic or natural mineral oxide colors as selected by Architect.

1. Chromix by L.M. Scofield Co., Longwood, FL, Los Angeles, CA.
2. Davis Colors, Beltsville, MD, Los Angeles, CA.
3. Lambco Colors by Lambert Corp. of Florida, Orlando, FL.
4. Landers-Segal Color Co., Inc., Passaic, NJ.
5. Solomon Colors, Springfield, IL.

2.2 INTEGRALLY COLORED CONCRETE

A. Provide integral color concrete for concrete pavements and other concrete work indicated on Drawings to be colored.

B. Consolidate color admixture in accord with manufacturer's instructions, using pigment proportions as required to match Architect-approved samples.

PART 3 - EXECUTION

3.1 PREPARATION

A. Compact top 6 inches subgrade to 95 percent of the Modified Proctor maximum dry density.

B. Do not allow traffic over prepared subgrade.

C. Uniformly moisten subgrade at time concrete is placed. Uniformly apply water immediately prior to concrete placement.

D. Accurately trim to required elevations, allowing for full thickness concrete.

3.2 CURBS AND GUTTERS

A. Construct concrete curbs, gutters, and other similar structures in accord with SSPWC Section 303-5, except finishing and curing of integral color concrete shall be as specified herein for walks and slabs.

3.3 JOINTS

A. Construction (pour) joints:

1. Place construction joints at all breaks in concrete placement lasting more than 1 hour and at color changes.
2. Unless otherwise indicated on Drawings, key construction joints for slabs 6 inches or more in thickness, except at expansion joints.

B. Expansion joints: Construct expansion joints with preformed resilient filler compatible with joint sealant materials, including joint backing, specified in Division 32 Section "Concrete Paving Joint Sealants".

C. Control joints:

1. Place control joints in all exterior flat concrete work, and other locations as indicated on Drawings.
2. Where control joints are not indicated on Drawings, verify specific types and layout with Architect prior to placing concrete. Size and shape of layout is dependent on specific areas, but do not space control joints farther apart than 10 feet o.c. in a square pattern (e.g., if a concrete walk is 4 feet wide, control joint should occur at equal spacing of approximately 4 feet o.c. along length).
3. Control joints may be one of two types, as indicated on Drawings: Saw-cut or hand-tooled.

   a. Saw-cut:

      1) Use at slabs on grade only. Make saw-cuts 1/8 inch wide. Do not cut through steel bar reinforcing. Depth of all saw-cuts shall not be less than 1/4 of slab thickness.
      2) Verify hardness condition of concrete before commencing saw-cutting to ensure that saw will not fret, ravel, or spall edges of cuts nor dislodge aggregate. Use saw-cutting equipment appropriate for the hardness condition of concrete

   b. Hand tooled: Make control joints with a "V" shaped jointing tool with rounded edges and a 3/4 inch deep keel.
   c. Whether saw-cut or hand-tooled, accurately lay out areas and make control joints straight and true, with clearly defined angles.

4. Construction (pour) joints may be substituted for control joints where specifically approved by Architect.

3.4 PROTECTION OF COMPLETED WORK

A. During curing period, protect concrete from damaging mechanical disturbances, water flow, loading shock, and vibration.

END OF SECTION 321313

SECTION 321400

UNIT PAVING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Concrete pavers set in sand setting beds.

1.2 ACTION SUBMITTALS

A. Product Data: For all materials proposed to be used for this scope of work.

B. Samples: (2) 3 inch by 9 inch by 10 cm sample of the stone pavers for review and approval by Landscape Architect.

1.3 QUALITY ASSURANCE

A. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

   1. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

   2. Mock up shall be 4’ x 4’ of each unit paver proposed to be used including all joinery, edge treatment, unit color variation, and trimming and cutting for embedded items.

1.4 PROJECT CONDITIONS

A. Weather Limitations:

   1. Cold-Weather Requirements: Comply with cold-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.
   2. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602. Do not apply mortar to substrates with temperatures of 100 deg F (38 deg C) and higher.

PART 2 - PRODUCTS

2.1 CONCRETE PAVERS

A. 3”x9” concrete unit paver. Manufacturer: Ackerstone (951) 674-0047, www.ackerstone.com, Color: Mesa Beige. Finish: Face Mix Grind.

B. Regional Materials: Provide concrete pavers that have been manufactured within 500 miles (800 km) of Project site from aggregates that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles (800 km) of Project site.

C. Concrete Pavers: Solid paving units complying with ASTM C 936, made from normal-weight aggregates.

1. Manufacturers: Subject to compliance with requirements.
2. Color: to match Landscape Architect's approved sample.

2.2 EDGE RESTRAINTS

A. As shown on the drawings.

2.3 ACCESSORIES

A. Cork Joint Filler: Preformed strips complying with ASTM D 1752, Type II.

2.4 AGGREGATE SETTING-BED MATERIALS

A. Graded Aggregate for Base: Sound, crushed stone or gravel complying with ASTM D 448 for Size No. 8.

B. Sand for Leveling Course: Sound, sharp, washed natural sand or crushed stone complying with gradation requirements in ASTM C 33 for fine aggregate.

C. Sand for Joints: Fine, sharp, washed, natural sand with 100 percent passing No. 16 (1.18-mm) sieve and no more than 10 percent passing No. 200 (0.075-mm) sieve.

D. Drainage Geotextile: Nonwoven needle-punched geotextile fabric, manufactured for subsurface drainage applications, made from polyolefins or polyesters; with elongation greater than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:

1. Apparent Opening Size: No. 40 (0.425-mm) sieve, maximum; ASTM D 4751.
2. Permittivity: 0.5 per second, minimum; ASTM D 4491.

E. Herbicide: Commercial chemical for weed control, registered with the EPA. Provide in granular, liquid, or wettable powder form.

2.5 SETTING-BED MATERIALS

A. Fine Aggregate for Setting Bed: ASTM D 1073, No. 2 or No. 3.

B. Sand for Joints: Fine, sharp, washed, natural sand or crushed stone with 100 percent passing No. 16 (1.18-mm) sieve and no more than 10 percent passing No. 200 (0.075-mm) sieve.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Mix pavers from several pallets or cubes, as they are placed, to produce uniform blend of colors and textures.

B. Cut unit pavers with motor-driven masonry saw equipment to provide pattern indicated and to fit adjoining work neatly. Use full units without cutting where possible.

1. For concrete pavers, a block splitter may be used.

C. Joint Pattern: As indicated on the Drawings.

D. Tolerances: Do not exceed 1/16-inch (1.6-mm) unit-to-unit offset from flush, level, or indicated slope, for finished surface of paving.

E. Provide edge restraints as indicated. Install edge restraints before placing unit pavers.

3.2 AGGREGATE SETTING-BED APPLICATIONS

A. Compact soil subgrade uniformly to at least 95 percent of ASTM D 698 laboratory density.

B. Place aggregate base, compact by tamping with plate vibrator, and screed to depth indicated.

C. Place drainage geotextile over compacted base course, overlapping ends and edges at least 12 inches (300 mm).

D. Place leveling course and screed to a thickness of 1 to 1-1/2 inches (25 to 38 mm), taking care that moisture content remains constant and density is loose and uniform until pavers are set and compacted.

E. Treat leveling course with herbicide to inhibit growth of grass and weeds.

F. Set pavers with a minimum joint width of 1/16 inch (1.5 mm) and a maximum of 1/8 inch (3 mm), being careful not to disturb leveling base. If pavers have spacer bars, place pavers hand tight against spacer bars. Use string lines to keep straight lines. Fill gaps between units that exceed 3/8 inch (10 mm) with pieces cut to fit from full-size unit pavers as approved by Landscape Architect.

G. Vibrate pavers into leveling course with a low-amplitude plate vibrator capable of a 3500- to 5000-lbf (16- to 22-kN) compaction force at 80 to 90 Hz.

H. Spread dry sand and fill joints immediately after vibrating pavers into leveling course. Vibrate pavers and add sand until joints are completely filled, then remove excess sand. Leave a slight surplus of sand on the surface for joint filling.

END OF SECTION 321400

SECTION 328400

IRRIGATION

PART 1 - GENERAL

1.1 GENERAL CONDITIONS

A. The requirements of the "General Conditions of the Contract" and of Division 1, "General Requirements", shall apply to all work of this Section with the same force and effect as though repeated in full herein.

1.2 DESCRIPTION

A. Scope of Work: Provide all labor, materials, transportation, and services necessary to furnish and install the Irrigation System as shown on the Drawings and described herein.

1.3 QUALITY ASSURANCE & REQUIREMENTS

A. Qualifications: The Contractor and its on-site job superintendent shall have regularly engaged and specialized, for the preceding five years, in the installation of irrigation systems of similar scope, size and complexity as the system being installed under this contract.

B. Permits and Fees: The Contractor shall secure the required licenses and permits, make payments of charges and fees required, give required notices to public authorities and verify permits secured or arrangements made by others affecting the work of this section.

C. Manufacturer's Directions: Manufacturer's directions and detailed drawings shall be followed in all cases where the manufacturers of articles used in this Contract furnish directions covering points not shown in the Drawings and Specifications.

D. Ordinances and Regulations:

1. Comply with all local, municipal and state laws, rules and regulations.

2. Conform to applicable provisions of the latest editions of the Uniform Plumbing Code, the National Electric Code and all codes properly governing the materials and work at the project site.

3. All City of Los Angeles Standard Plans and Specifications, LADWP Regulations, municipal and state laws, and rules and regulations governing or relating to any portion of this work are hereby incorporated into and made a part of these Specifications and shall apply to all work of this Section with the same force and effect as though repeated in full herein. The Contractor shall carry out their provisions. Anything contained in these Specifications shall not be construed to conflict with any of the above rules, regulations, or requirements. However, when these Specifications and Drawings call for or describe materials, workmanship, or construction of a better quality, higher standard, or larger size than is required by the above rules and regulations, the provisions of these Specifications and Drawings shall take precedence.

E. Explanation of Drawings:

1. Due to the scale of the Drawings, it is not possible to indicate all offsets, fittings, sleeves, etc., which may be required. The Contractor shall carefully investigate the structural and

finished conditions affecting all of his work and plan his work accordingly, furnishing such fittings, etc., as may be required to meet such conditions. Drawings are generally diagrammatic and indicative of the work to be installed. The work shall be installed in such a manner as to avoid conflicts between the irrigation system, planting, underground utilities, above ground utilities and architectural features.

2. All work called for on the Drawings by notes or details shall be furnished and installed whether or not specifically mentioned in the Specifications.

3. The Contractor shall not willfully install the irrigation system as shown on the Drawings when it is obvious in the field that obstructions, grade differences, or discrepancies in area dimensions exist that might not have been considered in engineering. Such obstructions or differences should be brought to the attention of CLIENT's Authorized Representative. In the event this notification is not performed, the Contractor shall assume full responsibility for any revision necessary.

F. Reference specification and standards:

1. ASTM: D1784 Rigid Poly (Vinyl Chloride) Compounds and Chlorinated Poly (Vinyl Chloride) Compounds.

2. ASTM: D1785 Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80 and CL200.

3. ASTM: F441 Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40, 80 and CL200.

4. ASTM: D2464 Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80.

5. ASTM: F437 Threaded Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80.

6. ASTM: D2466 Socket-Type Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40.

7. ASTM: F438 Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 40.

8. ASTM: F2564 Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings.

9. ASTM: F493 Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings.

10. The latest edition of the City of Los Angeles Standard Plans and Specifications.

11. The latest edition of the regulations for the construction of irrigation water systems within the Los Angeles Ranch Water District (LADWP).

1.4 SUBMITTALS

A. Material List:

1. The Contractor shall furnish the articles, equipment, materials, or processes specified by name in the Drawings and Specifications. No substitution will be allowed without prior written approval by CLIENT's Authorized Representative.

2. Complete material list shall be submitted prior to performing any work. Material list shall include the manufacturer, model number, and description of all materials and equipment to be used.

3. Although manufacturer and other information may be different, the following is a guide to proper submittal format:

Item	Manufacturer	Model Number	***Description***
1.	Pacific Plastics	Mainline piping per Specification	PVC Class 315 with solvent welded joints for sizes 2" and larger and PVC Schedule 40 with solvent welded for sizes 1-1/2" and smaller.
2.	Paige Electric	Irrigation Control wire	# 14 UF UL approved for control wire and # 12 UF UL approved for common wire.
3.	Nibco	T-113	T-113 with bronze cross handle - 3" and smaller.
4.	Rainbird	1806-SAM-PRS	6" pop-up spray head with Rain Bird "MPR" nozzles.
5.	Etc.	Etc.	Etc.

4. Irrigation submittal must be specific and complete with a full description of product use. All items must be listed and should include solvent/primer, wire, wire connectors, valve boxes, etc. No copies of manufacturer's literature (catalog cuts) are required as submittal information.

5. The Contractor may submit substitutions for equipment and materials listed on the Irrigation Drawings by following procedures as outlined in Section 1.06 of the Irrigation Specifications.

6. Equipment or materials installed or furnished without prior approval of CLIENT's Authorized Representative may be rejected and the Contractor may be required to remove such materials from the site at his own expense.

7. Approval of any item, alternative or substitute, indicates only that the product or products apparently meet the requirements of the Drawings and Specifications on the basis of the information or samples submitted.

8. Manufacturer's warranties shall not relieve the Contractor of his liability under the guarantee. Such warranties shall only supplement the guarantee.

B. Record Drawings:

1. The Contractor shall update irrigation record drawings to include all irrigation changes and additions. Electronic files of previous irrigation record drawings will be provided by CLIENT.

2. The Contractor shall provide and keep up-to-date a complete record set of plain paper copy prints which shall be corrected daily, showing every change from the original Drawings and Specifications and the exact installed locations, sizes, and kinds of equipment. Prints for this purpose may be obtained from CLIENT's Authorized Representative at cost. This set of drawings shall be kept on the site and shall be used only as a record set.

3. These drawings shall also serve as work progress sheets and shall be the basis for measurement and payment for work completed. These drawings shall be available at all times for observation and shall be kept in a location designated by CLIENT's Authorized

Representative. Should the record drawing progress sheets not be available for review or not be up-to-date at the time of any observation (refer to Section 3.10 - Site Observation Schedule), it will be assumed no work has been completed and the Contractor may be assessed by CLIENT the cost of that site visit at the current billing rate of CLIENTs Authorized Representative. No other observations shall take place prior to payment of that assessment.

4. The Contractor shall make neat and legible notations on the record drawing progress sheets daily as the work proceeds, showing the work as actually installed. For example, should a piece of equipment be installed in a location that does not match the plan, the Contractor must indicate that equipment has been relocated in a graphic manner so as to match the original symbols as indicated in the irrigation legend. The relocated equipment and dimensions will then be transferred to the original record drawing plan at the proper time.

5. Before start of plant establishment, the Contractor shall provide the completed irrigation red lined set of “as-built” record drawings to CLIENTs Authorized Representative for review and approval. After review and approval of the red lined set of “as-built” record drawings by CLIENT, “as-built” information shall be transferred to AutoCad electronic drawing files. Electronic files of irrigation system will be provided by CLIENT. Dimensions shall be made so as to be legible even on the final controller chart. Provide AutoCAD submittal plot for CLIENT’s review and approval prior to fabricating the controller charts. Update AutoCAD electronic files of “as-built” drawings in accord with CLIENT’s requirements.

6. The Contractor shall be responsible for preparation of irrigation “as-built” record drawings in AutoCAD format. As an option, the Contractor may request to have the irrigation “as-built” record drawings prepared by the irrigation designer. If the Contractor elects to have the irrigation “as-built” record drawings prepared by the irrigation designer, the Contractor shall provide the irrigation designer with a copy of the redlined the irrigation “as-built” record drawings approved by CLIENT’s Authorized Representative at start of plant establishment. The irrigation designer will transfer Contractor’s redlined irrigation “as-built” record drawing information in AutoCAD format to the Contractor within 30 days of the request. Failure of the Contractor to provide red lined “as-built” information to the irrigation designer at the required time could result in an extension of the plant establishment period. Extension of the plant establishment period caused by the Contractor non-performance to provide the irrigation designer with a copy of the redlined the irrigation “as-built” record drawings approved by CLIENT’s Authorized Representative shall be at no additional cost to CLIENT. The Contractor shall pay all costs involved for preparation of the irrigation “as-built” record drawings in AutoCAD format to the irrigation designer. This cost shall be included as a part of the Contractor’s bid and no additional compensation shall be paid to the Contractor by CLIENT.

7. The Contractor shall dimension from two (2) permanent points of reference, such as building corners, sidewalk edges, road intersections, etc., the location of the following items:

   a. Connection to existing water lines.

   b. Connection to existing electrical power.

   c. Gate valves.

   d. Routing of sprinkler pressure lines (dimension max. 100' along routing and at each change of direction).

   e. Electric control valves.

   f. Routing of control wiring and flow sensor cable.

g. Quick coupling valves.

h. Other related equipment as directed by CLIENT's Authorized Representative.

8. Prior to the start of maintenance, the Contractor shall deliver the corrected and completed mylars, prints and electronic files of the of irrigation “as-built” record drawings to CLIENT’s Authorized Representative. Submittal shall include one set of bond plots and one set of mylar plots along with one digital file on CD-ROM of the irrigation “as-built” record drawings in AutoCAD format and PDF format. Delivery of the mylars, prints and electronic files will not relieve the Contractor of the responsibility of furnishing required information that may be omitted from the redlined prints.

C. Controller Charts:

1. The Contractor shall include the irrigation controller charts. Electronic files of the Phase 1 irrigation controller charts will be provided by CLIENT.

2. Redlined As-built drawings shall be reviewed by CLIENT's Authorized Representative before controller charts are prepared.

3. Provide two controller charts for each controller supplied.

4. The chart shall show the area controlled by the automatic controller and shall be 11” X 17” in size and shall be prepared in AutoCAD format in the same manner as “as-built” record drawings.

5. The chart is to be a reduced drawing of the actual installed system. However, in the event the controller sequence is not legible when the drawing is reduced, it shall be enlarged to a size that will be readable when reduced.

6. The chart shall be a plain paper copy print and a different color shall be used to indicate the area of coverage for each station.

7. When completed and approved, the chart shall be hermetically sealed between two pieces of plastic, each piece being a minimum 20 mils.

8. These charts shall be completed approved and shall be turned over to CLIENT prior to start of landscape maintenance. Also, include one digital file on CD-ROM of the irrigation controller charts in PDF format shall be included on the record drawing CD-ROM.

D. Operation and Maintenance Manuals:

1. Prepare and deliver to CLIENT's Authorized Representative within ten calendar days prior to completion of construction, two hard-cover, three-ring binders containing the following information:

a. Index sheet which states Contractor's name, address, and telephone number, and which lists each installed equipment and material item, including names and addresses of manufacturers' local representatives.

b. Guarantee statement.

2. In addition to the above-mentioned maintenance manuals, provide CLIENT's maintenance personnel with instructions for major equipment and show evidence in writing to CLIENT's Authorized Representative prior to start of landscape maintenance that this service has been rendered.

E. Equipment to be Furnished:

1. Supply as a part of this contract the following:

   a. Operation and maintenance manuals.
   b. Color-coded controller charts laminated between 2 pieces of 20 mil plastic – Provide two charts for each controller.
   c. "As-built" record drawing mylars of irrigation plans.
   d. Completed Irrigation Guarantee Statement.
   e. Acceptance document to be signed by CLIENT's authorized representative.

2. The above-mentioned equipment shall be turned over to CLIENT prior to start of landscape maintenance. Before landscape maintenance and final observation to start can occur, evidence that CLIENT has received these items must be shown to CLIENT's Authorized Representative. Refer to "TURNOVER, AND ACCEPTANCE FORM" portion of these specifications for additional information.

F. Checklist:

1. Provide CLIENT with the following checklist information at the end of each segment of the project. This checklist shall be completed prior to start of maintenance.

   a. Plumbing permits obtained: If none required, so state.
   b. Material approvals. By whom approved and date.
   c. Pressure line tests: By whom approved and date.
   d. Manufacturer's warranties, if required: Recipient and date.
   e. Written guarantee: Recipient and date.
   f. Lowering of heads in lawn areas: If not complete, so state and include anticipated completion date.
   g. Install anti-drain valve protection as required to prevent low head drainage.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Handling of PVC Pipe and Fittings: The Contractor is cautioned to exercise care in handling, loading, unloading, and storing PVC pipe and fittings. All PVC pipe shall be transported in a vehicle, which allows the length of pipe to lie flat so as not to subject it to undue bending or a concentrated external load at any point. Any section of pipe that has been dented or damaged will be discarded, and if installed, shall be replaced with new piping.

1.6 QUALIFICATION OF IRRIGATION PERSONNEL

A. Contractor and on site field superintendent shall have the following minimum qualifications:

1. Not less than five years continuous experience in installation of commercial irrigation systems.

2. Demonstrate completion of the manufacturer's installation certification program for the weather based control system.

3. Upon CLIENT's request, supply a list of references listing successfully completed commercial irrigation systems.

1.7 SUBSTITUTIONS

A. If the Contractor wishes to substitute any equipment or materials for the equipment or materials listed on the Drawings and Specifications, he may do so by providing the following information to CLIENT's Authorized Representative for review:

1. Provide a statement indicating the reason for making the substitution. Use a separate sheet of paper for each item to be substituted.

2. Provide descriptive catalog literature, performance charts and flow charts for each item to be substituted.

3. Provide the amount of cost savings if the substituted item is approved.

B. CLIENT's Authorized Representative shall have the sole responsibility in accepting or rejecting any substituted item as an approved equal to the equipment and materials listed on the Drawings and Specifications.

1.8 GUARANTEE

A. The guarantee for the irrigation system shall be made in accordance with the attached form. The General Conditions and Supplementary Conditions of these Specifications shall be filed with CLIENT prior to acceptance of the irrigation system.

B. A copy of the guarantee form shall be included in the operations and maintenance manual.

C. The guarantee form shall be re-typed onto the Contractor's letterhead and shall contain the following information:

GUARANTEE FOR IRRIGATION SYSTEM

We hereby guarantee that the irrigation system we have furnished and installed is free from defects in materials and workmanship, and the work has been completed in accordance with the Drawings and Specifications, ordinary wear and tear, unusual abuse, or neglect accepted. We agree to repair or replace any defects in material or workmanship which may develop during the period of one year from date of acceptance and also to repair or replace any damage resulting from the repairing or replacing of such defects at no additional costs to CLIENT. We shall make such repairs or replacements within a reasonable time, as determined by CLIENT, after receipt of written notice. In the event of our failure to make such repairs or replacements within a reasonable time after receipt of written notice from CLIENT, we authorize CLIENT to proceed to have said repairs or replacements made at our expense and we will pay the costs and charges therefore upon demand.

PROJECT NAME: _____

PROJECT LOCATION: _____

SIGNED BY: _____
CONTRACTORS ADDRESS: _____
CONTRACTOR'S PHONE NO.: _____

DATE OF ACCEPTANCE: _____

1.9 Turnover to CLIENT

The following checklist, turnover and acceptance forms shall be re-typed onto the Contractor's letterhead. The form shall be completed by the contractor and shall contain the all of the information shown on this sample checklist form and turned over to CLIENTprior to start of maintenance:

TURNOVER, AND ACCEPTANCE FORM

PROJECT NAME: _____

PROJECT LOCATION: _____

TURNOVER ITEMS:

- ☐ Operation and maintenance manuals.
- ☐ Color-coded controller charts laminated between 2 pieces of 20 mil plastic – Provide two charts for each controller.
- ☐ "As-built" record drawing mylars of irrigation plans.
- ☐ Completed Irrigation Guarantee Statement.

DELIVERED BY:	ACCEPTED BY:
_____	
Name of Contractor	
_____	_____
Name of contractor's authorized representative	Name authorized representative
_____	_____
Signature contractor's authorized representative	Signature authorized representative
_____	_____
Date of deliverance	Date of acceptance

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Use only new materials of brands and types noted on drawings, specified herein, or approved equals.

B. PVC Pressure Main Line Pipe and Fittings: (Use Purple Pipe for irrigation systems carrying reclaimed water and white pipe for irrigation systems carrying domestic water)

1. Pressure main line piping for size 4” and larger shall be Class 200, PVC plastic, ASTM D1785, Type I, Grade I with rubber gasketed bell and spigot connections for size 4 in. and larger. The insertion mark shall be visible to show proper depth into spigot. Thrust blocks shall be installed in accord with manufacturer’s recommendations.

   a. All fittings including but not limited to bends, reducers, plugs and the opposite side of tee branches shall be bell end ductile iron fittings for PVC pipe.
   b. Fittings shall be manufactured of ductile iron, grade 70-55-05 in accord with ASTM A536. Fittings shall have deep bell push-on joints with gaskets meeting ASTM F477. Fittings shall be HARCO DEEP BELL as manufactured by The Harrington Corporation of Lynchburg, VA, Tel: (804) 845-7094, or approved equal by Leemco.
   c. Thrust blocks shall be standard concrete mix in accord with ASTM C-150, ASTM C-33, and ASTM C-94 with a compressive strength (28 days) of 3000 psi. Thrust blocks shall be installed at all tees, elbows, 45's, crosses, reducers, plugs, caps and valves. Contractor shall be responsible to ensure stability of all thrust blocks.

2. Pressure main line piping for sizes 2" and larger shall be PVC Class 315.

3. Class 315 pipe shall be made from an NSF approved Type I, Grade I, PVC compound conforming to ASTM resin specification D1784. All pipe must meet requirements as set forth in Federal Specification PS-22-70, with an appropriate standard dimension (S.D.R.) (Solvent-weld Pipe).

4. Pressure main line piping for sizes 1-1/2" and smaller shall be PVC Schedule 40 with solvent welded joints.

5. Schedule 40 pipe shall be made from NSF approved Type I, Grade I PVC compound conforming to ASTM resin specification D1785. All pipe must meet requirements as set forth in Federal Specification PS-21-70.

6. PVC solvent-weld fittings for pressure main line piping shall be Schedule 80, 1-2, II-I NSF approved conforming to ASTM test procedure D2466.

7. Solvent cement and primer for PVC solvent-weld pipe and fittings shall be of type and installation methods prescribed by the manufacturer.

8. All PVC pipe must bear the following markings:

   a. Manufacturer's name
   b. Nominal pipe size
   c. Schedule or class
   d. Pressure rating in P.S.I.
   e. NSF (National Sanitation Foundation) approval

f. Date of extrusion

9. All fittings shall bear the manufacturer's name or trademark, material designation, size, applicable I.P.S. schedule and NSF seal of approval.

C. PVC Non-Pressure Lateral Line Pipe and Fittings: (Use Purple Pipe for irrigation system carrying recycled water and white pipe for irrigation system carrying domestic water)

1. Non-pressure buried lateral line piping shall be PVC Schedule 40 with solvent-weld joints

2. PVC solvent-weld fittings for pressure main line piping shall be Schedule 40, 1-2, II-I NSF approved conforming to ASTM test procedure D2466.

3. Schedule 40 pipe shall be made from NSF approved Type I, Grade I PVC compound conforming to ASTM resin specification D1785. All pipe must meet requirements as set forth in Federal Specification PS-21-70.

4. Solvent cement and primer for PVC solvent-weld pipe and fittings shall be of type and installation methods prescribed by the manufacturer.

5. All PVC pipe must bear the following markings:

a. Manufacturer's name
b. Nominal pipe size
c. Schedule or class
d. Pressure rating in P.S.I.
e. NSF (National Sanitation Foundation) approval
f. Date of extrusion

6. All fittings shall bear the manufacturer's name or trademark, material designation, size, applicable I.P.S. schedule and NSF seal of approval.

D. Brass Pipe and Fittings:

1. Where indicated on the Drawings, use red brass screwed pipe conforming to Federal Specification #WW-P-351.

2. Fittings shall be red brass conforming to Federal Specification #WW-P-460.

E. Gate Valve:

n/a

I. Quick Coupling Valve:

n/a

J. Backflow Prevention Unit: (For systems using potable domestic water for irrigation)

1. Backflow prevention unit is existing. Protect in place.

I. Master Valve

n/a

K. Check Valve:

n/a

L. Control Wiring:

n/a

M. Weather Based Irrigation Controller Assembly:
n/a

N. Stainless Steel Vandal-Resistant Controller Enclosure Assembly:

n/a

O. Electric Control Valve:

1. All electric control valves shall be the same size and type shown on the Drawings.

2. All electric control valves shall have a manual flow adjustment.

3. Provide and install one control valve box for each electric control valve.

P. Valve Box:

1. All valve boxes shall be green in color.

2. Use 10" x 10-1/4" round box for all gate valves, Carson Industries #910-12B with green bolt-down cover or approved equal. Extension sleeve shall be PVC with minimum size of six (6) inches.

3. Use 9-1/2" x 16" x 11" rectangular box for all electric control valves, Carson Industries #1419-12B with green bolt-down cover or approved equal.

4. Use 10" diameter x 10-1/4" deep round plastic valve box for all quick coupling valves, Carson Industries #910-12B with green bolt-down cover or approved equal.

Q. Sprinkler Head:

n/a

R. Identification Tag:

1. I.D. tags for electric control valves shall be manufactured from Polyurethane Behr Desopan. Use Christy's standard tag hot-stamped with black letters on yellow background. Tags shall be numbered to match programming shown on the Drawings. Provide one tag for each electric control valve.

2. I.D. tags for quick coupling valves shall be manufactured from Polyurethane Behr Desopan. Use Christy's maxi tag, hot-stamped with black letters on purple background. Tags shall read "Warning - Unsafe Water - Do Not Drink." Tag shall be printed in English on one side and Spanish on the other. Provide one tag for each quick coupling valve.

3. Special order tags from T. Christy Enterprises, 655 East Ball Road, Anaheim, CA 92805. Phone (714) 507-3300 and Fax (714) 507-3310.

S. Flow sensor and flow transmitter.

n/a

T. Flow Sensor Cable and Conduit:

n/a

W. Miscellaneous Irrigation Equipment:

1. Refer to the Drawings for sizes and types of miscellaneous irrigation equipment.

2. All miscellaneous irrigation equipment shall be as specified or approved equal.

PART 3 - EXECUTION

3.1 GENERAL INSTALLATION REQUIREMENTS

A. Before work is commenced, hold a conference with CLIENT, General Contractor, and Owner to discuss general details of the work.

B. Verify dimensions and grades at job site before work is commenced.

C. During the progress of the work, a competent superintendent and any assistants necessary shall be on site, all satisfactory to CLIENT. The superintendent shall not be changed, except with consent of CLIENT, unless that person proves unsatisfactory and ceases to be employed. The superintendent shall represent Contractor in its absence and all directions given to the superintendent shall be as binding as if given to Contractor.

D. All work indicated or noted on Drawings shall be provided whether or not specifically mentioned in the Specifications.

E. If there are ambiguities between Drawings and Specifications, and specific interpretation or clarification is not issued prior to bidding, the interpretation or clarification will be made only by CLIENT, and Contractor shall comply with the decisions. In the event the installation contradicts the directions given, the installation shall be corrected by Contractor at no additional cost to CLIENT.

F. Layout of sprinkler lines shown on Drawings is diagrammatic only. Location of sprinkler equipment is contingent upon and subject to integration with all other underground utilities. Contractor shall employ all data contained in the Contract Documents and shall verify this information at the construction site to confirm the manner by which it relates to the installation.

G. Coordinate the installation of all sprinkler materials, including pipe, with the landscape Drawings to avoid conflict with the trees, shrubs, or other planting.

H. Do not proceed with the installation of the sprinkler system when it is apparent that obstructions or grade differences exist or if conflicts in construction details, legend, or specific notes are discovered. All such obstructions, conflicts, or discrepancies shall be brought to the attention of CLIENT.

I. Replace, or repair to the satisfaction of CLIENT, all existing paving disturbed during the course of this work. New paving shall be the same type, strength, texture, finish, and be equal in every way to the material removed.

J. CLIENT reserves the right to make temporary repairs as necessary to keep equipment in operating condition without voiding Contractor's guarantee or relieving Contractor of its responsibilities during the guarantee shall not be allowed.

K. All sprinkler heads will require installation of anti-drain devices to prevent low head drainage.

L. Coordinate the installation of all sprinkler materials, including pipe, with the landscape Drawings to avoid conflict with the trees, or other planting.

3.2 OBSERVATION OF SITE CONDITIONS

A. All scaled dimensions are approximate. The Contractor shall check and verify all size dimensions and receive approval from CLIENT's Authorized Representative prior to proceeding with work under this Section.

B. Exercise extreme care in excavating and working near existing utilities. The Contractor shall be responsible for damages to utilities, which are caused by his operations or neglect. Check existing utilities drawings for existing utility locations.

C. Coordinate installation of sprinkler irrigation materials including pipe, so there shall be NO interference with utilities or other construction or difficulty in planting trees, shrubs, and ground covers.

D. The Contractor shall carefully check all grades to satisfy itself that he may safely proceed before starting work on the irrigation system.

3.3 PREPARATION

A. Physical Layout:

1. Prior to installation, the Contractor shall stake out all pressure supply lines, routing and location of sprinkler heads.

2. All layouts shall be reviewed by CLIENT's Authorized Representative prior to installation.

B. Water Supply:

1. The irrigation system shall be connected to water supply point(s) of connection as indicated on the Drawings.

2. Connections shall be made at the approximate location(s) shown on the Drawings. The Contractor is responsible for minor changes caused by actual site conditions.

C. Electrical Supply:

1. Electrical connections for any and all automatic controllers shall be made to electrical point(s) of connection as indicated on the Drawings.

2. Connections shall be made at the approximate location(s) shown on the Drawings. The Contractor is responsible for minor changes caused by actual site conditions.

3.4 INSTALLATION

A. Trenching:

1. Dig trenches straight and support pipe continuously on bottom of trench. Lay pipe to an even grade. Trenching excavation shall follow layout indicated on the Drawings and as noted.

2. Provide for a minimum of twenty-four (24) inches cover for all pressure supply lines of 2 1/2-inch nominal diameter or smaller.

3. Provide for a minimum of twenty-four (24) inches cover for all pressure supply lines of 3-inch nominal diameter or larger.

4. Provide for a minimum of twelve (12) inches for all non-pressure lines.

5. Provide for a minimum cover of twenty-four (24) inches for all control wiring.

6. Provide for a minimum cover of eighteen (18) inches for all communication cable conduits.

B. Backfilling:

1. The trenches shall not be backfilled until all required tests are performed. Trenches shall be carefully backfilled with the excavated materials approved for backfilling, consisting of earth, loam, sandy clay, sand, or other approved materials, free from large clods of earth or stones. Backfill shall be mechanically compacted in landscaped areas to a dry density equal to adjacent undisturbed soil in planting areas. Backfill will conform to adjacent grades without dips, sunken areas, humps or other surface irregularities.

2. A fine granular material backfill will be initially placed on all lines. No foreign matter larger than one-half (1/2) inch in size will be permitted in the initial backfill.

3. Flooding of trenches will be permitted only with approval of CLIENT's Authorized Representative.

4. If settlement occurs and necessitates adjustments in pipe, valves, sprinkler heads, lawn, plantings, or other installed work, the Contractor shall make all required adjustments without cost to CLIENT.

C. Trenching and Backfill Under Paving:

1. Trenches located under areas where paving, asphaltic concrete, or concrete will be installed, shall be backfilled with sand (a layer six [6] inches below the pipe and three [3] inches above the pipe) and compacted in layers to 95% compaction, using manual or mechanical tamping devices. Trenches for piping shall be compacted to equal the compaction of the existing adjacent undisturbed soil and shall be left in a firm unyielding condition. All trenches shall be left flush with the adjoining grade. The Contractor shall set in place; cap and pressure test all piping under paving prior to the paving work.

2. Generally, piping under existing walks is done by jacking, boring, or hydraulic driving, but where any cutting or breaking of sidewalks and/or concrete is necessary, it shall be done and replaced by the Contractor as a part of the Contract cost. Permission to cut or break sidewalks and/or concrete shall be obtained from CLIENT's Authorized Representative. No hydraulic driving will be permitted under concrete paving.

3. Provide for a minimum cover of eighteen (18) inches between the top of the pipe and the bottom of the aggregate base for all pressure and non-pressure piping installed under asphaltic concrete paving.

D. Plastic Pipe:

1. Install plastic pipe in accord with manufacturer's recommendations.

2. Install sprinkler head on plastic pipe as indicated on Drawings.

3. Prepare all welded joints with manufacturer's primer prior to applying solvent.

a. Allow welded joints at least 15 minutes set-up/curing time before moving or handling.

b. Partially center load pipe in trenches to prevent arching and shifting when water pressure is on.

c. Do not permit water in pipe until a period of at least four hours has elapsed for solvent weld setting and curing, unless recommended otherwise by solvent manufacturer.

4. Attach pipe identification tape directly to pipe as specified in Section 02601, where color-impregnated and stenciled pipe is not utilized.

5. Do backfilling when pipe is cool.

a. Pipe can be cooled by operating the system for a short time before backfill, or by backfilling in the early part of the morning before the heat of the day.

6. Curing:

a. When the temperature is above 80°F., allow soluble weld joints at least 24 hours during the time before water is introduced under pressure.

b. When temperature is below 80°F., follow manufacturer's recommendations.

E. Assemblies:

1. Routing of sprinkler irrigation lines as indicated on the Drawings is diagrammatic. Install lines (and various assemblies) in such a manner as to conform to the details per the Drawings.

2. Install NO multiple assemblies in plastic lines. Provide each assembly with its own outlet.

3. Install all assemblies specified herein in accordance with respective detail. In absence of detail drawings or Specifications pertaining to specific items required to complete work, perform such work in accordance with best standard practice with prior approval of CLIENT's Authorized Representative.

4. PVC pipe and fittings shall be thoroughly cleaned of dirt, dust, and moisture before installation. Installation and solvent welding methods shall be as recommended by the pipe and fitting manufacturer.

5. On PVC to metal connections, the Contractor shall work the metal connections first. Teflon tape or approved equal, shall be used on all threaded PVC to PVC, and on all threaded PVC to metal joints. Light wrench pressure is all that is required. Where threaded PVC connections are required, use threaded PVC adapters into which the pipe may be welded.

F. Conduit and Sleeves:

1. Coordination: Sleeving shall be considered existing only when installed under another contract. For all other installations, provide materials and coordinate conduit and sleeve installation with other trades as required to facilitate smooth construction sequence.

2. Conduit: Furnish and install conduit where control wires pass under or through walls, walks and paving. Conduits to be of adequate size to accommodate retrieval for repair of wiring and shall extend 12 inches beyond edges of walls and pavement.

3. Sleeving: Install sleeves for all pipes passing through or under walks and paving as shown on the Drawings. Sleeving to be of adequate size to accommodate retrieval of wiring or piping for repair and shall extend 12 inches beyond edges of paving or other construction.

G. Line Clearance:

1. All lines shall have a minimum clearance of six (6) inches from each other and from lines of other trades. Parallel lines shall not be installed directly over one another.

H. Automatic Controller Assembly:

1. Electric control valves shall be fitted with battery operated controller per drawings.

I. Weather Based Irrigation Controller Setup, Schedule and Program:

n/a

J. Electric Control Valves:

1. Install each electric control valve in a separate valve box.

2. Install where shown on the Drawings. Where grouped together, allow at least twelve (12) inches between adjacent valve boxes.

3. Each valve number shall be heat branded on valve box lid with 1½" tall letters. Branding unit available from valve number shall be heat branded on valve box lid with 1½" tall letters. Branding unit is available from Hydroscape Products, Inc., phone number (714) 639-1850.

K. Flushing of System:

1. After all new sprinkler pipelines and risers are in place and connected, all necessary diversion work has been completed, and prior to installation of sprinkler heads, the control valves shall be opened and full head of water used to flush out the system.

2. Sprinkler heads shall be installed only after flushing of the system has been accomplished to the complete satisfaction of CLIENT's Authorized Representative.

L. Sprinkler Heads:

1. Install the sprinkler heads as designated on the Drawings. Sprinkler heads to be installed in this work shall be equivalent in all respects to those itemized.

2. Spacing of heads shall not exceed the maximum indicated on the Drawings. In no case shall the spacing exceed the maximum recommended by the manufacturer.

3. All sprinkler heads shall be set perpendicular to finish grade of the area to be irrigated unless otherwise designated on the plans.

3.5 TEMPORARY REPAIRS

CLIENT reserves the right to make temporary repairs as necessary to keep the irrigation system equipment in operating condition. The exercise of this right by CLIENT shall not relieve the Contractor of his responsibilities under the terms of the guarantee as herein specified.

3.6 EXISTING TREES

Where it is necessary to excavate adjacent to existing trees, the Contractor shall use all possible care to avoid injury to trees and tree roots. Excavation in areas where two (2) inch and larger roots occur shall be done by hand. All roots two (2) inches and larger in diameter, except directly in the path of pipe or conduit, shall be tunneled under and shall be heavily wrapped with burlap to prevent

scarring or excessive drying. Where a ditching machine is run close to trees having roots smaller than two (2) inches in diameter, the wall of the trench adjacent to the tree shall be hand trimmed, making clean cuts through. Roots one (1) inch and larger in diameter shall be painted with two coats of Tree Seal, or equal. Trenches adjacent to tree should be closed within twenty-four (24) hours; and where this is not possible, the side of the trench adjacent to the tree shall be kept shaded with burlap or canvas.

3.7 FIELD QUALITY CONTROL

A. Adjustment of the System:

1. The Contractor shall flush and adjust all sprinkler heads for optimum performance and to prevent overspray onto walks, roadways, and buildings as much as possible.

2. If it is determined that adjustments in the irrigation equipment will provide proper and more adequate coverage, the Contractor shall make such adjustments prior to planting. Adjustments may also include changes in nozzle sizes and degrees of arc as required.

3. Lowering raised sprinkler heads by the Contractor shall be accomplished within ten (10) days after notification by CLIENT.

4. All sprinkler heads shall be set perpendicular to finished grades unless otherwise designated on the Drawings.

B. Testing of the Irrigation System:

1. The Contractor shall request the presence of CLIENT's Authorized Representative in writing at least 48 hours in advance of testing.

2. Test all new pressure lines under hydrostatic pressure of 150 pounds per square inch and prove watertight. Pipe shall be center loaded with all pipe joints exposed during the pressure test.

   Note: Testing of pressure main lines shall occur prior to installation of the electric control valves.

3. All piping under paved areas shall be tested under hydrostatic pressure of 150 pounds per square inch and proven watertight prior to paving.

4. Sustain pressure in lines for not less than two (2) hours. If leaks develop, replace joints and repeat test until entire system is proven watertight.

5. All hydrostatic tests shall be made only in the presence of CLIENT's Authorized Representative. No pipe shall be backfilled until it has been observed, tested, and approved in writing.

6. Furnish necessary force pump and all other test equipment.

7. When the irrigation system is completed, perform a coverage test in the presence of CLIENT's Authorized Representative to determine if the water coverage for planting areas is complete and adequate. The coverage test shall be accomplished using a contractor furnished radio remote receiver and transmitter to turn each control valve on to observe sprinkler coverage and then to turn the control valve off when coverage test of that system is complete. Furnish all materials and perform all work required to correct any inadequacies of coverage due to deviations from the Drawings, or where the system has been willfully installed as indicated on the Drawings when it is obviously inadequate,

without bringing this to the attention of CLIENT's Authorized Representative. This test shall be accomplished before any ground cover is planted.

8. Upon completion of each phase of work, the entire system shall be tested and adjusted to meet site requirements. The contractor shall provide an irrigation water schedule for plant establishment as well as any subsequent schedule changes for review and approval by owner. Approval of irrigation schedule indicates only that the schedule submitted apparently meet the scheduling requirements of plant materials on the basis of the information submitted. Any adjustments to the schedule based on plants actual water needs or changes in weather conditions shall be the responsibility of the contractor.

3.8 MAINTENANCE

A. The entire irrigation system shall be under full automatic operation for a period of seven (7) days prior to any planting.

B. MHM's Authorized Representative reserves the right to waive or shorten the operation period.

3.09 CLEAN-UP

Clean up shall be made as each portion of work progresses. Refuse and excess dirt shall be removed from the site, all walks and paving shall be broomed or washed down, and any damage occurring to the work of others shall be repaired to original conditions.

3.10 FINAL SITE OBSERVATION PRIOR TO ACCEPTANCE

A. The Contractor shall operate each system in its entirety for CLIENT Authorized Representative at time of final observation. Any items deemed not acceptable by CLIENT’s Authorized Representative shall be reworked to the complete satisfaction of CLIENT's Authorized Representative.

B. The Contractor shall show evidence to CLIENT's Authorized Representative that CLIENT has received all accessories, charts, record drawings, and equipment as required before final site observation can occur.

3.11 SITE OBSERVATION SCHEDULE

A. The Contractor shall be responsible for notifying CLIENT’s Authorized Representative in advance for the following observation meetings, according to the time indicated:

1. Pre-Job Conference - 7 days
2. Pressure supply line installation and testing - 48 hours
3. Automatic controller installation - 48 hours
4. Automatic controller activation and scheduling - 48 hours
5. Control wire installation - 48 hours
6. Lateral line and sprinkler installation - 48 hours
7. Point of connection installation – 48 hours
8. Master Valve, strainer and flow sensor installation.- 48 hours
9. Flow sensor conduit installation.-48 hours
7. Coverage test - 48 hours
8. Final site observation - 7 days

B. When site observations have been conducted by a party other than CLIENT's Authorized

Representative, show evidence in writing of when and by whom these observations were made.

C. Prior to walking irrigation system with Owner's Authorized Representative, the Contractor shall pre-walk irrigation system with its own crew to ensure compliance with plans and specifications. The Contractor shall observe those items shown on the construction observation check list below and initial and date that the all items observed are in accordance with plans and specifications. This list shall be presented to CLIENT's Authorized Representative prior to the final irrigation walkthrough with CLIENT's Authorized Representative.

D. No site observations will commence without record drawings or "Construction Observation Check List". In the event the Contractor calls for a site visit without record drawings or "Construction Observation Check List", without completing previously noted corrections, or without preparing the system for said visit, it shall be responsible for reimbursing CLIENT's Authorized Representative at his current hourly billing rate, portal to portal (plus transportation costs), for the inconvenience. No further site observations will be scheduled until this charge has been paid and received.

E. The following checklist and acceptance form shall be re-typed onto the Contractor's letterhead. The form shall be completed by the contractor and shall contain the all of the information shown on the sample checklist form shown on the next page.

CONSTRUCTION OBSERVATION CHECK LIST

PROJECT NAME: _____

PROJECT LOCATION: _____

DESCRIPTION: Sprinkler Heads	**Completed by** **Contractor**	**Date**	**Approved by** **CLIENT**	**Date**
Heads plumb and straight				
Spacing per design intent				
Correct nozzles used				
Pressure set appropriately				
PCS Screens installed				
N.P. Caps (when required)				
Heads at correct height				
Back-up heads properly located				
Turn down screws used only for minor adjustments only				
Nozzles are clean and unobstructed				
Pop-up heads retracting properly				
Heads adjacent to building/paving located correctly				
Head to head coverage ok				
Minimal overspray				
Swing joints installed				

No leaks observed				
Systems on slopes separated correctly				
Direction of spray appropriate				
No low head drainage				
Rotor are rotating				
Install van nozzles where necessary				
Proper arc patterns installed				

DESCRIPTION: Valves – All sizes and types	**Completed by Contractor**	**Date**	**Approved by CLIENT**	**Date**
Correct size of boxes				
Correct color of boxes				
Heat branding complete				
Reclaimed designation on valves and boxes				
Height of valves in boxes				
Gravel in boxes (2cu. ft.) installed				
Brick supports in boxes installed				
Valve I.D. tags installed				
Pressure setting on valve set properly				
Bolt downs on boxes provided				
PVC sleeve in box at gate valve				
Proper wire connectors installed				
No leaks observed				
Correct clearance from valve to gravel provided				
Brass handwheel installed				
2” operating nuts installed				

Irrigation Controllers				
Proper gauge and color of control and common wires.				
HydroPoint WeatherTRAK controller set-up, schedule and program complete per irrigation drawings				

Additional Items				
Coverage test complete				

END OF SECTION 328400

SECTION 329113

SOIL PREPARATION

PART 1 - GENERAL

1.1 SUMMARY

A. General: Preserve and Stockpile Existing Topsoil, Provide and Place Planting Soils and Planting Soil Amendments in accordance with Contract Documents

B. Related Work Specified Elsewhere:

1. Grading - Refer to Drawings
2. Section 328000 Irrigation
3. Section 329300 Planting

C. Summary of Work: This Section includes the following:

1. Harvesting Soil from Site In-Situ or Stockpiling of top 2-4 feet for Reuse as Planting Soil Base Component to be Amended.
2. Importing of Harvested Soil from off-site if required.
3. Planting Soil Testing to determine Amendment Requirements.
4. Planting Soil Placement and Amendment Procedures.
5. Planting Soil Drainage Improvements.

1.2 REFERENCES

A. Except as modified by governing codes and by the Contract Documents, comply with the applicable ASTM or USDA provisions and recommendations.

B. Where the language in any of the documents referred to herein is in the form of a recommendation or suggestion, such recommendation or suggestion shall be deemed to be mandatory under this Contract.

1.3 SYSTEM DESCRIPTION

A. Performance Requirements

1. Provide Planting Soils, to be hand-tamped or compacted to firm the soil and to prevent subsidence but not to exceed 80% compaction of maximum dry weight, Proctor Scale.

1.4 SUBMITTALS

A. Product Data:

1. Submit to Construction Manager with copies for Landscape Architect and Soil Scientist technical data for each manufactured or packaged product of this section. Include manufacturer's product testing and analysis, and installation instructions for manufactured or processed items or materials.

2. Submit to Construction Manager with copies for Landscape Architect and Soil Scientist locations of soil material sources.

B. Certificates:

1. Submit to Construction Manager with copies for Landscape Architect and Soil Scientist certified analysis for each treatment, amendment, and fertilizer material specified and as used. Include guaranteed analysis and weight for packaged material.

2. Prior to job acceptance submit to Construction Manager with copies for Landscape Architect and Soil Scientist written certificates for the following total quantities by weight as used on Project Site for Project materials:

a. Quantity and type of commercial fertilizer, organic fertilizer, or organic amendment.

b. Quantity and type of additional soil amendments

C. Soil Analysis:

1. Unless otherwise directed soil analysis shall be done by Garn Wallace, Soils Scientist, Wallace Labs, 365 Coral Circle, El Segundo, California 90245, 310-615-0116 SOIL SCIENTIST). Contractor shall provide samples for testing as directed by Wallace Labs.

2. Furnish a soil analysis made by a qualified independent soil-testing agency stating percentages of organic matter; gradation of silt, clay and sand content; cation exchange capacity; deleterious material; pH, mineral and plant-nutrient content of topsoil or soil mix.

3. Report suitability of topsoil or soil mix for growth of applicable planting material. State recommended quantities of nitrogen, phosphorus, and potash nutrients and any limestone, aluminum sulfate, or other soil amendments to be added to produce a satisfactory topsoil or soil mix.

4. Construction Manager, Landscape Architect and Soil Scientist reserve the right to require additional soil analysis at any time such additional samples of materials are deemed necessary for verification of conformance to specification requirements. Contractor shall furnish samples for this purpose upon request and shall perform testing as requested.

D. Test Reports: Submit to Construction Manager with copies for Landscape Architect and Soil Scientist written report of each sample tested. Testing Laboratory and specific tests must be approved by Landscape Architect. Soil tests must be unique and individual to each sample taken and are not to be resubmitted or reused. Samples and analysis must be submitted within 7 calendar days of sampling. Soils Testing shall consists of the minimum following:

1. "Complete Standard Analysis" reports of imported soils base materials.
2. Soil Fertility Composition and Bulk Density Test Reports of soil base material to be used for "structural soil planting mix".
3. Each report shall include the following as a minimum and such other information required specific to material tested. Test Reports:

a. Date issued.

b. Project Title and names of Contractor and material supplier.
c. Testing laboratory name, address, and telephone number, and name(s), as applicable, of each field and laboratory inspector.
d. Date, place, and time of sampling or test, with a record of temperature and weather conditions.
e. Location of material source.
f. Type(s) of test
g. Results of tests including identification of deviations from acceptable ranges.

E. Samples:

1. Top Soil each source, 1 lb. package
2. Organic Compost: 1 lb package
3. Other Required amendments
4. Complete Soil Mix, 1 lb. package
5. Mulch Material: 1 lb package

F. Soil Blending Procedures:

1. Contractor shall submit a detailed soil blending operations plan. To the degree possible, soils shall be amended in place.

G. Purchase Documentation:

1. Top Soil Purchase and Delivery Invoices
3. Fertilizer and Chemical Amendments Purchase and Delivery Invoices.
4. Organic Compost Purchase and Delivery Invoices.

H. Settlement Mock-Up: Mock-up areas of backfill at the specified depths and apply irrigation to induce settlement, if required to help determine the amount of settlement which will be caused by irrigation and rain.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experienced installer who has completed soil work similar in material, design, and extent to that indicated for this Project and with a record of successful landscape establishment.

B. Installer Field Supervision: Require installer to maintain full-time supervisor during times soil work is in progress.

C. Soil Testing Agency Qualifications: An independent laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct the testing indicated and specializes in types of tests to be performed, or a member of the Council on Soil Testing and Plant Analysis and has staff members with extensive agricultural research experience as demonstrated with peer reviewed publications.

D. Applicable Laws: Meet requirements of applicable laws, codes, and regulations required by authorities having jurisdiction over Work.

1.6 PRODUCT DELIVERY, STORAGE AND HANDLING:

A. Packaged Materials: Deliver packaged materials in containers showing weight, analysis, and name of manufacturer. Protect materials from deterioration during delivery and while stored at Project Site.

B. Stockpiling: Soil, mulch, or amendment materials, stored on Project Site temporarily in stockpiles prior to placement shall be protected from intrusion of contaminants and erosion. Soil materials shall be covered with a tarpaulin until time of actual use. All stockpiled materials shall be placed on tarpaulin, heavy polyethylene sheeting or other suitable barrier to protect paving surfaces from staining or soiling by stockpiled materials.

1.7 PROJECT CONDITIONS

A. Utilities: Determine location of planting area utilities including lighting, irrigation and drainage; and perform work in a manner, which will avoid damage. Hand excavate, as required.

B. Waterproofing: Perform work in a manner, which will avoid damage to planter waterproofing membrane, protection board or other structural sealing materials.

C. Lifting: The Contractor shall be responsible for lifting and placing planting soils and other required material through exterior means or lifts, as approved by the Construction Manager and Landscape Architect.

D. Construction Sequencing: Soil Planting Mix shall be installed prior to any adjacent concrete, pavements, or concrete base slab or header cradle installation, which require the support of the structural soil.

E. Environmental Requirements for Soils:

1. Perform both off-site and on-site soil work only during suitable weather conditions. Do not work soil when frozen, excessively wet, excessively dry, or in otherwise unsatisfactory condition. Do not work soil when moisture is so great that excessive compaction will occur, nor when it is so dry that dust will form in the air or that clods will not break readily.

2. Apply water, if necessary, to bring soil to an optimum moisture content for tilling and placement.

3. Do not apply chemicals if wind conditions will cause hazardous drift to people or property.

F. Protection of Amended Soil and Suitable Harvested Soils:

1. Protect amended soils and suitable harvested soils from contamination such as fuels, paints, welding, concrete washing, compaction, acid washings, etc. Correct any damage to soils or plants at no cost to the owner.

PART 2 - PRODUCTS

2.1 GENERAL

A. All soil planting mix materials shall fulfill the requirements as specified.

B. Samples of individual components of planting soil and amendments in addition to blended planting soil mixes including mulch materials shall be submitted by the Contractor for

testing and analysis to the approved testing laboratory. Comply with specific material requirements specified.

1. No base component material for plant mix shall be used until certified test reports by an agricultural chemist have been received and approved by the Landscape Architect and Soil Scientist.

2. As necessary, make any and all soil mix amendments and resubmit test reports indicating amendments until approved.

C. Landscape Architect and Soil Scientist may request additional testing by Contractor for confirmation of mix quality and / or soil mix amendments at any time until completion.

2.2 SOIL MATERIALS AND PRODUCTS

A. Soil Base Component: Base Soil Material shall be Harvested Soil from the site either in situ or stockpiled. If insufficient quantities of approved Base Soil Material exist on the Project Site, Base Soil Material shall be Imported Harvested Soil from off-site local source as approved by Landscape Architect or Soil Scientist. Base Soil Material from offsite shall follow the same testing procedures for acceptance as on-site material.

1. Soil acceptance criteria for soil harvesting:

General – harvested soil shall be free of roots, clods, stones larger than 1-inch in the greatest dimension, pockets of coarse sand, noxious weeds, sticks, lumber, hazardous material, brush and other litter. It shall not be infested with nematodes or other undesirable disease-causing organisms such as insects and plant pathogens.

Topsoil shall be friable and have sufficient structure in order to give good tilth and aeration to the soil. Soil shall have a field capacity of at least 15 percent on a dry weight basis.

Gradation limits - soil shall be a sandy loam or loam. The definition of soil texture shall be the USDA classification scheme. Gravel over ¼1/2-inch in diameter shall be less than 10% by weight.

Permeability Rate - Hydraulic conductivity rate shall be not less than one inch per hour nor more than 20 inches per hour when tested in accordance with the USDA Handbook Number 60, method 34b or other approved methods.

Fertility - The range of the essential elemental concentration in soil shall be as follows:

	Ammonium Bicarbonate/DTPA Extraction parts per million (mg/kilogram dry weight basis
phosphorus	2 - 40
potassium	40 - 220
iron	2 - 35
manganese	0.3 - 6
zinc	0.6 - 8
copper	0.1 - 5
boron	0.2 - 1
magnesium	50 - 150
sodium	0 - 100
sulfur	25 - 500
molybdenum	0.1 - 2

Harvested soil may need to be amended and conditioned to optimize plant growth.

Acidity - The soil pH range measured in the saturation extract (Method 21a, USDA Handbook Number 60) shall be 6.0 - 7.9.

Salinity - The salinity range measured in the saturation extract (Method 3a, USDA Handbook Number 60) shall be 0.5 - 2.5 milliohm/cm.

Chloride - The maximum concentration of soluble chloride in the saturation extract (Method 3a, USDA Handbook Number 60) shall be 150 mg/l (parts per million).

Boron - The maximum concentration of soluble boron in the saturation extract (Method 3a, USDA Handbook Number 60) shall be 1 mg/l (parts per million).

Sodium Adsorption Ratio (SAR) - The maximum SAR shall be 3 measured per Method 20b, USDA Handbook Number 60.

Aluminum – Available aluminum measured with the Ammonium Bicarbonate/DTPA Extraction shall be less than 5 parts per million.

Soil Organic Matter Content - Sufficient soil organic matter shall be present to impart good physical soil properties but not be excessive to cause toxicity or cause excessive reduction in the volume of soil due to decomposition of organic matter.

Heavy Metals - The maximum permissible elemental concentration in the soil shall not exceed the following concentrations:

	Ammonium Bicarbonate/DTPA Extraction parts per million (mg/kilogram) dry weight basis
arsenic	1
cadmium	1
chromium	10
cobalt	2
lead	30
mercury	1
nickel	5
selenium	3
silver	0.5
vanadium	3

If the soil pH is between 6 and 7, the maximum permissible elemental concentration shall be reduced 50%. If the soil pH is less than 6.0, the maximum permissible elemental concentration shall be reduced 75%. No more than three metals shall be present at 50% or more of the above values.

Phytotoxic constituent, herbicides, hydrocarbons etc. - Germination and growth of monocots and dicots shall not be restricted more than 10%. Total petroleum hydrocarbons shall not exceed 50 mg/kg dry soil measured per the modified EPA Method No. 8015. Total aromatic volatile organic hydrocarbons (benzene, toluene, xylene and ethylbenzene) shall not exceed 0.5 mg/kg dry soil measured per EPA Methods No. 8020.

2. Soil acceptance criteria for amended soil

The amended soil will be accepted if it complies with the following requirements. The soil will need to be leached if the concentration of boron exceeds 1 part per million, if the alkalinity is substantially over 8.0 or if the salinity exceeds 2.5 milliohm/cm.

Fertility - The range of the essential elemental concentration of amended soil shall be as follows:

	Ammonium Bicarbonate/DTPA Extraction parts per million (mg/kilogram dry weight basis
phosphorus	10 - 40
potassium	100 - 220
iron	5 - 35
manganese	0.6- 6
zinc	1 - 8
copper	0.3 - 5
boron	0.2 - 1
magnesium	50 - 150
sodium	0 - 100
sulfur	25 - 500
molybdenum	0.1 - 2

Soil Organic Matter Content – About 3% to 5% - sufficient soil organic matter shall be present to impart good physical soil properties but not be excessive to cause toxicity or cause excessive reduction in the volume of soil due to decomposition of organic matter.

2.3 SOIL AMENDMENT MATERIALS AND PRODUCTS

A. Organic Compost / Humus Materials: Organic matter or material of a general humus nature capable of sustaining the growth of plants, with no “foreign” matter (i.e. glass, plastic, etc.) or material toxic to plant growth. It shall be free of stones, lumps or similar objects larger than two inches in greatest diameter, roots or brush. It shall be weed free. Composts that have been derived from organic wastes that meet the following requirements and are approved by the project Soil Scientist are acceptable compost / Humus sources.

1. Humus material shall have an acid-soluble ash content of no less than 6% and no more than 20%.
2. The pH of the material shall be between 6 and 7.5.
3. The salt content shall be less than 10 milliohm/cm @ 25° C. on a saturated paste extract.
4. Boron content of the saturated extract shall be less than 1.0 parts per million.
5. Silicon content (acid-insoluble ash) shall be less than 50%.
6. Calcium carbonate shall not be present if to be applied on alkaline soils.
7. Types of acceptable products are composts, manures, mushroom composts, straw, alfalfa, peat mosses etc. low in salts, low in heavy metals, free from weed seeds, free of pathogens and other deleterious materials.
8. Composted wood products are conditionally acceptable [stable humus must be present]. Wood based products are not acceptable which are based on red wood or cedar.
9. Sludge-based materials are not acceptable.
10. Carbon:nitrogen ratio is less than 25:1.
11. The compost shall be aerobic without malodorous presence of decomposition products.
12. The maximum particle size shall be 0.5 inch, 80% or more shall pass a No. 4 screen for soil amending.

13. Maximum total permissible pollutant concentrations in amendment in parts per million on a dry weight basis:

arsenic	20
copper	150
selenium	50
cadmium	15
lead	200
silver	10
chromium	300
mercury	10
vanadium	500
cobalt	50
molybdenum	60
zinc	300
nickel	100

Higher amounts of salinity or boron may be present if the soils are to be pre-leached to reduce the excess or if the plant species will tolerate the salinity and/or boron.

B. Acceptance of amended soil

1. Take one sample per 100 cubic yards. After he has perfected his methods, the frequency can be less. Separate batches of organic amendments need to be tested and accepted.

2.4 PLANTING SOIL MIXES

A. AMENDED PLANTING SOIL MIX: Provide the following amendments of approved Harvested Soil or approved Imported Harvested Soil for planting soil. Percentages of components, unless otherwise noted, will be established upon completion of individual tests results for components of the various mixes.

1. Soil Base Material (On-site Harvested Soil or Imported Topsoil)

2. Uniformly incorporate amendments ingredients by tilling or by shovel. Organic Compost / Humus Matter shall be maintained moist, not wet, during mixing.

a. Mixing of Amendments: Add Organic Compost / Humus Matter and other soil amendments as specified by soil testing to Soil Base Material in proportions as specified and as confirmed by testing. Other amendments shall not be added unless approved to extent and quantity by Landscape Architect or Soil Scientist and additional tests have been conducted to verify type and quantity of amendment is acceptable.

3 Preliminary recommendations for bid purposes only. The final recommendations are subject to change.

a. Homogeneously blend the following materials into clean excavated soil. Remove debris, rocks and foreign material. Remove clods, rock and gravel larger than 1 inch in diameter. Excessive gravel should not be present. Rates are per cubic yard:

Ammonium sulfate (21-0-0) – 1/4 pound
Potassium sulfate (0-0-50) – 1/3 pound
Triple superphosphate (0-45-0) – 1/4 pound
Gypsum – 1 pound

Organic amendment – 15% by volume

B. TREE BOX SOIL MIX: UC 50/50 mix

1. 50% by volume number 16 medium sand.

2. 50% by volume medium peat, pH 4.0 to 6.5, ECe less than 3 millimho/cm, carbon:nitrogen ratio less than 25, minus 10 mesh, minimum cation exchange capacity is 50 millimoles per 100 grams, minimum 60% organic matter.

Medium sized , number 16 sand	Percent passing
4 mesh	100
10 mesh	98-100
16 mesh	68-82
32 mesh	0-20
60 mesh	0-1

3. Per cubic yard, blend the following materials into the lightweight soil:

Ureaformaldehyde (38-0-0)	1/3 pound
Potassium sulfate (0-0-50)	1/2 pound
Triple superphosphate (0-45-0)	1/3 pound
Agricultural gypsum	1/2 pound
Ground agricultural limestone (calcium carbonate)	approximately 5 pounds, adjust the acidity to achieve a final pH between 6.5 and 7.2

4. Properties of mix shall be as follows:

   a. Organic carbon – 4.0 to 8.0% by dry weight.
   b. Ammonium bicarbonate available DTPA nutrients.
   c. Potassium – 125 to 250 parts per million.
   d. Phosphorus – 25 to 40 parts per million.

5. Sufficient fertility for vigorous plant growth.

Chemical Properties	Soil Specified Values
pH	6.5 - 7.2
Salinity	0.5-2
Chloride	< 150
Soluble boron	< 1
SAR	<6
Phosphorus	31-44
Potassium	125-250
Iron	2-150
Manganese	0.3-35
Zinc	0.6-8
Copper	0.1-5
Magnesium	50-150

Chemical Properties	Soil Specified Values
Sodium	0-100
Sulfur	25-500
Aluminum	< 5
Molybdenum	0.1-2
Calcium carbonate	slight or none
Heavy metals	
Arsenic	<2
Cadmium	<2
Chromium	<10
Cobalt	<2
Lead	<60
Mercury	<1
Nickel	<5
Selenium	<3
Silver	<0.5
Vanadium	< 3

Units are mg/kg dry weight
Weight – about 65 to 70 pounds per cubic foot saturated

PART 3 - EXECUTION

3.1 SOIL SURVEY

A. Contractor shall review locations for soil samples with Landscape Architect for approval prior to commencing potholing procedure. Contractor shall pothole **four** hole**s** per acre. Contractor shall take individual soil samples from the top 2 feet, between 2 and 4 feet and between 4 feet and the depth of the excavation at each pothole. Contractor shall mark each sample by location and depth. Contractor shall send one pound of each sample by zone and depth to the laboratory for testing and evaluation. Contractor shall take Soil Samples from locations identified by Landscape Architect and Soil Scientist. Soil Samples shall be taken at least 14 days in advance of commencing earth moving and grading operations. Contractor shall allow sufficient time for performance of Soil Testing and Test Results which will identify areas of suitable soil for Soil Harvesting, Stockpiling and Reuse as Planting Topsoil.

3.2 SOIL HARVESTING

A. Harvest suitable soil as determined by the soil survey results. Soil harvesting needs to selective and limited to the better soil. The target soil is darker in color, is less dusty, is more friable and has lower compaction, probably contains roots, contains less rock and gravel, contains less debris, etc. Preliminary identification of Suitable Soil for Soil Harvesting will be made based on Soil Survey results.

B. Contractor shall Stockpile the apparently suitable soil based on evaluation by Soil Scientist of Initial soil testing. Place unsuitable soil in a separate location. Mark the apparently suitable soil and warn other trades to not place trash on the stockpile.

C. Generally, the stockpiles should not be higher than 6 feet. The stockpiles should be worked from the side – equipment should not be operated on the amended soil surface, especially after amending. Moist soils are more sensitive to damage than dry soil. Dry soil can be stockpiled higher, particularly if they are low in soil organic matter.

D. Take one sample per 100 cubic yard with a minimum of 10 samples from the suitable stockpile for additional soil testing by Soil Scientist to determine its properties and recommendations for amendments.

3.3 SOIL AMENDING

A. Based on Soil Scientist soil amendment recommendations the Contractor shall submit proposed method to amend the soil for acceptance. The Contractor shall submit one pound samples of proposed soil amendments to Soil Scientist for acceptance. Each new batch of soil amendment needs to be submitted for conformance to the initial approved sample. Amend the stockpiled harvested soil or in-situ harvested soil as approved by Soil Scientist.

B. Soil for planting shall be free of rocks over 1/2 inch in diameter and free of foreign debris, refuse, plants or roots, clods, weeds, sticks, solvents, petroleum products, concrete, base rock, or other deleterious or undesirable and unwanted materials. Soil shall be free of soil-borne diseases and capable of sustaining healthy plant life. Materials not meeting such requirements shall be removed, including all temporary road bases or pavement already in place.

3.4 SOIL AMENDING DEPTHS

A. Unless otherwise specified in the drawings or directed by Landscape Architect and Soil Scientist the depth of amended soil shall be as follows:

1. Shrub and Herbaceous Plantings
Amend to 18-inches depth for an area equal to future mature shrub drip line or for shared or mass planting areas amend entire planting area.

2. Turf Grass and Meadow Areas
Amend to 9-inches depth entire planting area.

3 Trees
Amend to depth of the rootballs for trees but not less than 30-inches to an area 36-inches beyond rootball edge.

3.5 ENHANCED SOIL DRAINAGE

A. General Site Areas

1. Remove the existing surface vegetation for shrubs and weeds taller than 6 inches.

2. Soil Augering:

a.) Auger holes 5 feet on center 1 foot in diameter, 6 feet deep. Uniformly blend gypsum into the excavated soil at the rate of 2 pounds per cubic yard and disperse the gravel throughout the soil. Fill the augered hole with amended soil. Lightly compact to about 80% compaction.

b.) Note: The soil in the augered holes could be PAM drenched when backfilling to help maintain porosity. The PAM drench will consolidate the soil and prevent subsidence. About 20 gallons of at 0.015% PAM solution would be needed for each hole. This will add to the time to complete the work.

3. Soil Conditioning:

a.) Verify that there is at least 9 inches of suitable soil in all areas. Add suitable import soil as needed to provide a minimum of 9 inches of suitable soil.

b.) Add fertilizers if required to provide for optimum fertility in the top 9 inches. Add soil organic soil organic amended to provide between 3% and 7% soil organic matter in the top 9 inches.

c.) When the soil is partially dry and is workable, disc the soil with a harrow disk at least 9 inches deep. Reduce the clods to less than 1 inch in diameter. Uniformly blend the fertilizers if used and soil organic matter if used into the soil.

d.) Test the soil for acceptance.

e.) Roll the soil with a turf roller to consolidate the soil.

f.) Irrigate the site for at least 2 weeks. Spray weeds with Roundup Pro. Repeat one more time.

g.) Remove surface rocks, gravel, and debris if present.

h.) Scratch the soil about ½ deep to prevent a sharp soil interface.

i.) Lay sod and roll for firm contact with soil.

j.) Irrigate. Provide for sufficient soil moisture but not excessive water.

B. Tree Pits

1. Auger vertical drain holes one per tree pit off-center at low elevation of excavation, 1 foot diameter, 6 feet deep. Fill with amended soil.

2. Before the amended soils are placed, rip the base soil 6 inches deep to avoid a sharp soil interface.

3.6 PREPARATION OF SUBGRADE:

A. Examine site and verify that conditions are suitable to receive Work and that no defects or errors are present which would cause defective installation of products or cause latent defects in workmanship and function.

B. Verify that the locations of utilities, structures and other underground items have been clearly marked and protected.

C. Use every possible precaution to prevent damage to existing conditions to remain such as structures, utilities, plant material to remain, walks on or adjacent to the Project Work.

3.7 PLACEMENT OF STOCKPILED OR IMPORTED TOPSOIL SOIL MIXES:

A. Install Planting Soil in 6 inch lifts and compact each lift by hand tamping to firm the soil and to prevent subsidence but not to exceed 80% compaction.

B. Do not proceed with the installation of the Structural Soil material until all walls, curb footings and utility work in the area have been installed. For site elements dependent on

Structural Soil for foundation support, postpone installation until immediately after the installation of Structural Soil.

C. Install subsurface planting area drain lines as shown on the Drawings prior to installation of Structural Soil material.

D. Excavate and compact the proposed subgrade to depths, slopes and widths as shown on the Drawings. Maintain all required angles of repose of the adjacent materials as shown on the drawings. Do not over excavate compacted subgrades of adjacent pavement or structures.

E. Confirm that the subgrade is at the proper elevation and compacted as required. Subgrade elevations shall slope parallel to the finished grade and or toward the subsurface drain lines as shown on the drawings.

F. Clear the excavation of all construction debris, trash, rubble and any foreign material. In the event that fuels, oils, concrete washout silts or other material harmful to plants have been spilled into the subgrade material, excavate the soil sufficiently to remove the harmful material. Fill any over excavation with approved fill and compact to the required subgrade compaction.

G. Do not proceed with the installation of Planting Soil until all utility work in the area has been installed. All subsurface drainage systems shall be operational prior to installation of Structural Soils. Test drainage structures and verify working condition. Verify acceptable condition to protection boards and other waterproofing components and notify Construction Manager of any damage.

H. Protect adjacent walls, walks and utilities from damage or staining by the soil. Use 1/2" plywood and or plastic sheeting as directed to cover existing concrete, metal and masonry work and other items as directed during the progress of the work.

1. Clean up all trash and any soil or dirt spilled on any paved surface at the end of each working day.

2. Any damage to the paving or architectural work caused by the soils installation Contractor shall be repaired by the Contractor at the Contractor's expense.

I. Maintain all silt and sediment control devices required by applicable regulations. Provide adequate methods to assure that trucks and other equipment do not track soil from the site onto adjacent property and the public right of way.

J. Before proceeding with Work, notify Owner, Owner’s Park Developer, Construction Manager and Landscape Architect in writing of unsuitable conditions and conflicts.

3.8 FINE GRADING

A. After the initial placement and rough grading of the Soil but prior to the start of fine grading, the Contractor shall request review of the rough grading by the Landscape Architect. The Contractor shall set sufficient grade stakes for checking the finished grades.

B. Adjust the finish grades to meet field conditions as directed.

1. Provide smooth transitions between slopes of different gradients and direction.

2. Fill all dips and remove any bumps in the overall plane of the slope.

a. The tolerance for dips and bumps in Planting Soil areas shall be a 1/2-inch deviation from the plane in 10'.

3. All fine grading shall be inspected and approved by the Landscape Architect prior to the installation of other items to be placed on the Planting Soil.

3.9 PLACEMENT OF MULCH

A. Place mulch as indicated on the Drawings.

3.10 ACCEPTANCE STANDARDS

A. The Landscape Architect will inspect the work upon the request of the Contractor. Request for inspection shall be received by the Construction Manager and Landscape Architect at least 10 days before the anticipated date of inspection.

3.11 CLEAN-UP

A. Upon completion of the Structural Soil installation operations, clean areas within the contract limits. Remove all excess fills, soils and mix stockpiles and legally dispose of all waste materials, trash and debris. Remove all tools and equipment and provide a clean, clear site. Sweep, do not wash, all paving and other exposed surfaces of dirt and mud until the paving has been installed over the Structural Soil material. Do no washing until finished materials covering Structural Soil material are in place.

3.10 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Disposal: Remove surplus soil and waste material, including excess subsoil, unsuitable soil. Trash, and debris, and legally dispose of it off of the Owners property.

END OF SECTION 329100

SECTION 329300

PLANTING

PART 1 - GENERAL

1.1 SUMMARY

A. General: Provide Exterior Plantings in accordance with Contract Documents.

1. Drawings and general provisions of the Contract Documents, including General Conditions and Divisions 1 Specification Sections, apply to this Section.

B. Related Work Specified Elsewhere

1. Section 329113– Soil Preparation
2. Section328400 – Irrigation

C. Summary of Work: This Section includes the following:

1. Contractor shall furnish all labor, material, equipment, and services necessary to install all landscape planting as indicated on the approved plans and as specified herein, and shall perform all other incidental work necessary to accomplish the intent of this specification and the approved plans including the following:

   a. Trees, Shrubs, Vines, Ornamental Grasses, and Herbaceous Plants
   b. Fertilizers, and Mulches
   c. Staking, guying, tying, and trunk guards.
   d. Pest and disease control
   e. Maintenance under contract and guarantee

2. Installation of Owner-Furnished Trees: Contractor's responsibilities include, but are not limited to, the following:

   a. Review of plant material at grower and that the contractor will accept the plant material when trees are off loaded at site.
   b. Delivery Schedule.
   c. Shipping Cost.
   d. Off Loading.
   e. Receivership at off loading.
   f. Acceptable holding/storage yard with water and adequate protection (shade).
   g. Planting.
   h. Maintenance.
   i. Warranty as described in specifications.

1.2 REFERENCES

A. Except as modified by governing codes and by the Contract Documents, comply with the applicable provisions and recommendations of the following:

1. ANSI Z60.1 “American Standard for Nursery Stock”

B. Where the language in any of the documents referred to herein is in the form of a recommendation or suggestion, such recommendation or suggestion shall be deemed to be mandatory under this Contract.

1.3 SUBMITTALS

A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections.

1. Product Data for each type of product indicated.

2. Label Data substantiating that planting materials comply with specified requirements.

3. Schedule indicating anticipated dates and locations for each type of planting. This schedule shall be submitted within 15 calendar days after Contract Notice to Proceed. Include in this schedule anticipated dates from commencement and sequencing of planting operations, including but not limited to selections and tagging, layouts and layout approval, placement of tree, and commencement of maintenance period.

4. Plant Submittals Shall Include: Submittal sources and photographs of actual trees and all other plant materials to be used on the project for review and approval by Landscape Architect.

5 Mulch: Submittal of 3 pound bag of material for approval by Landscape Architect.

6. Planting Soil: Submittal of 3 pound bag of each type of material specified for approval by Landscape Architect

B. Material Certificates: Chain-of-custody certificates certifying that wood products comply with forest certification requirements. Include evidence that manufacturer is certified for chain of custody by an FSC-accredited certification body.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experienced installer who has completed landscaping work similar in material, design, and extent to that indicated for this Project and with a record of successful landscape establishment.

B. Installer's Field Supervision: Require installer to maintain an experienced full-time supervisor on the Project Site during times landscaping is in progress. Supervisor shall not be changed, except with consent of the Owner. Supervisor shall represent contractor in contractor's absence, and all direction given to supervisor shall be as binding as if given to Contractor.

C. Nursery Stock Standards: Provide quality, size, genus, species, and variety of trees indicated, complying with applicable requirements of ANSI Z60.1 "American Standard for Nursery Stock".

1. Selection of plant material will be made by Landscape Architect (at Landscape Architect's discretion), who will tag plants at their place of growth before they are prepared for transplanting.

D. Measurements: Measure trees according to ANSI Z60.1 with branches and trunks or canes in their normal position. Do not prune to obtain required sizes. Take caliper measurements 6 inches above ground for trees up to 4 –inch caliper size, and 12 inches above ground for larger sizes. Measure main body of tree for height and spread; do not measure branches or roots tip to tip.

E. Applicable Laws: Meet requirements of applicable laws, codes, and regulations required by authorities having jurisdiction over Work.

F. Verification of Dimensions and Quantities: All scaled dimensions are approximate. Before proceeding with any work, carefully check and verify all dimensions and quantities. Immediately inform Owner of all discrepancies between drawings, specifications, and actual conditions. Do not work in any area where there is a discrepancy until approval to proceed has been received from Owner.

G. Forest Certification: Except for mulch and similar recycled wood-based materials and products, provide wood products obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship."

H. Reuse of Nursery Boxes: Containers for plant materials must be reused by plant materials supplier or source for new plantings of similar type provided for the Work. Recycling plant containers by remanufacturing (or similar processes) for other uses or landfill (or similar type) disposal is not acceptable.

I. Installation of Owner-Furnished Trees:

1. Arrange and pay for delivery of Owner-furnished trees.

2. Coordinate delivery dates of Owner-furnished trees in Contractor's construction schedule.

3. Review Contract Documents and other information and notify Owner of discrepancies or anticipated problems in installation of Owner-furnished trees.

5. If Owner-furnished trees are damaged as a result of Contractor's operations; Contractor shall be responsible for repair or replacement.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Packaged Materials: Deliver packaged materials in containers showing weight, analysis, and name of manufacturer. Protect materials from deterioration during delivery and while stored at site. The Contractor shall furnish standard products in manufacturer’s standard containers bearing original labels showing quantity, analysis, and name of manufacturer. All containers and bags shall remain on site until work is completed.

B. Stockpiling: Soil, mulch, or amendment materials, stored on Project Site temporarily in stockpiles prior to placement shall be protected from intrusion of contaminants and erosion. All stockpiled materials shall be placed on tarpaulin, heavy polyethylene sheeting or other suitable barrier to protect paving surfaces from staining or soiling by stockpiled materials. All temporary storage means and methods shall be approved by Construction Manager and Landscape Architect

C. Inspection:

1. Plants shall be subject to inspection and approval by Landscape Architect (at Landscape Architect's discretion) at the place of growth and again upon delivery and prior to planting for conformity to specification requirements as to quality, size and variety. Such approval shall not impair the right of rejection due to damage suffered in handling, transportation and/or planting. Rejected plants shall be removed immediately from the Project Site. Inspection by Landscape Architect outside the City of Los Angeles or beyond a 90-mile radius from the Project Site shall be made at the expense of the Owner. A Contractor's representative shall be present at all inspections at the Contractor's expense.

2. Written requests for inspection of plant material at their place of growth shall be submitted to Landscape Architect at least 14 days prior to delivery along with submittal of photographs of plants to be inspected. The Landscape Architect may refuse inspection if in his/her judgment a sufficient quantity or quality of plants is not available for inspection. The Contractor shall, at his own expense, supply the Landscape Architect with such labor and assistance as may be necessary in the handling of material for proper inspection.

3. Tagging of trees shall be as follows: for every 20 trees planted, 22 trees will be tagged assuring appropriate replacement for (a) trees damaged prior to transplanting, and (b) trees requiring replacement under terms of the one-year warranty.

4. Reject all materials, prior to planting, that are found unacceptable, and coordinate alternate selections with Landscape Architect. Owner warrants that all Owner-furnished trees and shrubs from outside vendors will be released to Contractor in viable condition. Should Contractor take exception to the condition of any Owner-furnished trees or shrubs at time of receipts, it shall so notify Owner in writing immediately. Such exception, if taken shall be accompanied by documentation of purported defect and or malady from a recognized authority or expert, at no additional cost to Owner.

E. Trees and Shrubs:

1. Do not prune before delivery, except as approved by Landscape Architect. Protect bark, branches, and root systems from sun-scald, drying, sweating, whipping, and other handling and tying damage. Do not bend trees and shrubs in such a manner as to destroy natural shape. Provide protective covering during delivery. Do not drop trees and shrubs during delivery.

2. Deliver trees after preparations for planting have been completed and install immediately. If planting is delayed for more than 6 hours after delivery, set planting materials in shade, protect from weather and mechanical damage, and keep roots moist. Notify Construction Manager and Landscape Architect three (3) days prior to delivery of trees. Do not deliver more trees and shrubs than can be planted in one day. It is not permissible to retain unplanted trees and shrubs on-site overnight.

3. Water as often as necessary to maintain root systems in a moist condition.

E. Ornamental Grasses and Herbaceous Material

1. Deliver healthy container plants. Do not prune before delivery, except as approved by Landscape Architect. Protect plant and root from sun-scald, drying, sweating, whipping, and other handling and tying damage. Provide protective

covering during delivery. Do not drop ornamental grasses and herbaceous material during delivery

2. Deliver ornamental grasses and herbaceous material after preparations for planting have been completed and install immediately. If planting is delayed for more than 6 hours after delivery, set planting materials in shade, protect from weather and mechanical damage, and keep roots moist. Do not deliver more ornamental grasses and herbaceous material than can be planted in one day. It is not permissible to retain unplanted ornamental grasses and herbaceous material on-site overnight.

3. Water as often as necessary to maintain root systems in a moist condition.

1.6 PROJECT CONDITIONS

A. Utilities: Determine location of in-planter utilities including lighting, irrigation and drainage in plating areas; and perform work in a manner, which will avoid damage. Hand excavate, as required.

B. Waterproofing: Perform work in a manner, which will avoid damage to planter waterproofing membrane, protection board or other structural sealing materials.

C. Mechanical Lifting: The Contractor shall be responsible for lifting plant material, planting soils and other required material to planter areas for planting through exterior means or lifts as approved by the Construction Manager and Landscape Architect.

D. Safety: The Contractor shall be responsible for pedestrian and vehicular safety and control within the Project Site. He/she shall provide the necessary warning devices and ground personnel needed to give safety, warning and protection to persons and vehicular traffic within the area.

E. Environmental Requirements and Planting Schedule: Plant weather permits. Do not plant when the ground is frozen excessively wet, or the soil is otherwise in an unsatisfactory condition for planting:

F. Clean-up: Upon completion of each phase of work under this section, the Contractor shall clean and remove from the area all unused materials and debris resulting from the performance of the work. All paved areas and walks within the project site shall be left in a clean and safe condition.

1.7 WARRANTY

A. Warranty: Warrant all planting materials, for the warranty period indicated, against defects including death and unsatisfactory growth, except for defects resulting from lack of adequate maintenance, neglect, abuse by Owner or Owner's Park Developer, abnormal weather conditions unusual for warranty period, or incidents that are beyond Contractor's control.

1 All plant material (including shrubs and ground cover) for a period of one year after the date of Substantial Completion.

2. Remove and replace dead planting materials immediately unless required to plant in the succeeding planting season.

3. Replace planting materials that are more than 25% dead or in an unhealthy condition at end of warranty period.

4. A limit of one replacement of each plant material will be required, except for losses or replacements due to failure to comply with requirements.

1.8 PLANT MAINTENANCE

A. Maintain trees, shrubs and herbaceous plantings by pruning, cultivating, watering, weeding, fertilizing, tightening and repairing stakes and guy supports, and resetting to proper grades or vertical position, as required to establish healthy, viable plantings. Restore or replace damaged tree wrappings. Maintain trees, shrubs and herbaceous plantings for the following period: 90 days following Substantial Completion.

PART 2 - PRODUCTS

2.1 TREES, SHRUBS, AND VINES

A. General: Furnish nursery-grown trees, shrubs and herbaceous plants conforming to ANSI Z60.1 with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully-branched, healthy, vigorous stock free of disease, insects, eggs, larvae, and defects such as knots, sun scald, injuries, abrasion, and disfigurement.

1. Grade: Provide trees, shrubs and herbaceous plants of sizes and grades conforming to ANSI Z60.1 for type of tree required. Trees, shrubs and herbaceous plants of a larger size may be used if acceptable to Landscape Architect, with proportionate increase in size of roots or balls or container.

2. Species: All trees, shrubs and herbaceous plants shall be true to species and cultivar specified. Certification of cultivars by supplying nursery must be supplied in writing to Construction Manager and Landscape Architect.

3. Labels: Label at least 1 tree, shrub or herbaceous plant of each variety and size with a securely attached, waterproof tag bearing legible designation of botanical and common name. Field Tags by Landscape Architect shall not be removed until so directed by Construction Manager and Landscape Architect.

4. Single Stem Trees: Single-stem trees with straight trunk, well-balanced crown, and intact leader, of height and caliper indicated, conforming to ANSI Z60.1 for type of trees required.

5. Branching Height: For single-stem trees branching height shall be 5-0” and not more than 1/2 tree height or as required by Landscape Architect or indicated on the Drawings. Limbing up shall not deform natural form of the tree.

6. Multiple-Stem Trees: Multiple-stem trees with multiple basal or low branched stems, and well-balanced crown, of height and caliper indicated, conforming to ANSI Z60.1 for type of trees required. Unless specified otherwise multiple-stem trees shall have 3 to 5 stems minimum.

7. Depth of Planting: The depth of planting must be checked for all trees being tagged at the nursery. If the root/trunk flare is not visible, the root/trunk (the intersection of the trunk and the buttress roots) must be located. Any tree with sig-

nificant adventitious root growth or evidence of girdling roots shall be subject to rejection by Landscape Architect on a case by case basis. Any soil above the root/trunk flare shall be removed prior to digging. After the removal of any excess soil above the root/trunk flare, the tree shall be hand dug and drum laced.

8. Container Grown Material: Container grown shrubs and herbaceous plants shall be nursery grown, conforming to ANSI Z60.1. Shrubs shall be healthy, vigorous, well rooted, fully branched, symmetrical, and well formed. Container stock shall have well developed fibrous roots, so that the root mass will retain its shape and hold together when removed from the container. Container plants shall not be root bound.

9. Plugs: Plugs shall be nursery grown, conforming to ANSI Z60.1. and shall be healthy, vigorous, well rooted, fully branched, symmetrical, and well formed. Plugs shall have well developed fibrous roots, so that the root mass will retain its shape and hold together when removed from the container. Container plants shall not be root bound.

10. Substitution. Substitution by Contractor shall not be permitted.

11. Ornamental Grasses and Herbaceous Material Sources: Ornamental Grasses and Herbaceous material shall be provided by grower specializing in Ornamental Grass and Herbaceous plant production.

12. Sources: Unless otherwise specified all plant materials shall be from a well established Southern California region grower or nursery. Plants shall come from the following sources:

    a. GENERAL NURSERIES

        Sources:
        Tree of Life Nursery
        33201 Ortega Highway
        P.O. Box 635
        San Juan Capistrano, CA 92693
        Tel: (949) 728-0685
        Fax: (949) 728-0509
        www.TreeOfLifeNursery.com

        Las Pilitas Nursery
        8331 Nelson Way
        Escondido, CA 92026
        Phone 760.749.5930
        Fax 760.749.5932

        Berylwood Tree Farm
        1048 E La Loma Avenue
        Somis, CA 93066
        Tel: (805) 485-7601

Norman's Nursery
8665 Duarte Road
San Gabriel, CA 917775
Tel: (626) 285-9795
Fax: (626) 287-2352

Monrovia Nursery
18331 E. Foothill Boulevard
Azusa, CA 91702-1385
Tel: (800) 999-9321
www.monrovia.com

San Marcos Growers
125 South San Marcos Road
Santa Barbara, CA 93000
Tel: (805) 683-1561
Fax: (805) 964-1329

Native Sons, Nursery
379 West El Campo Road
Arroyo Grande, CA 93420

ABC Nursery
424 E. Gardena Blvd.
Gardena, CA 90248
Tel: (800)654-8062
Fax: (310) 327-1608

Boething Treeland Nursery
23475 Long Valley Road
Woodland Hills, CA 91367
Tele: (818) 883-1222
Fax: (818) 712-6979
www.boethingtreeland.com

Or approved equal

2.2 MULCHES

A. Organic Mulch: Free from deleterious materials and suitable as a top dressing to trees and shrubs, consisting of one of the following:

"Walk On" Shredded Bark Mulch. Natural fir and blended wood product with non-toxic mineral dye; treated with fungus and insect repellent; consisting of organic composted hummus and wood; screened to 2 to 3 inches. Bark mulch shall not contain plastic, biosolids or other debris. Color to match Landscape Architect's reference sample.

a. Wood Mulch - Type 1: "Forest Blend".

Supplier: Tierra Verde Industries, 7982 Irvine Blvd, Irvine, CA 92618, Phone: (949) 551-0363, Fax: (949) 551-1532; or equal.

b. P-104 and P-107 Mulch - Wood Chips – Double Ground - ADA accessible mulch.

Supplier: Artesia Sawdust Products, Inc. 13434 Ontario Avenue, Ontario, CA 91761, Phone: (909) 947-5983, Fax: (909) 923-7208.

2.3 FILTER FABRIC BARRIERS

A. All filter fabric shall be synthetic and rot proof.

B. Non-Woven, UV stabilized, polypropylene geo-textile shall be 140 NL as manufactured by Mirafi 718-461-2200, or approved equal.

2.4 TREE BRACING

A. Stakes: Straight grained lodgepole pine free of knots, splits, checks or disfigurements. Stakes shall be 2 inch minimum nominal size in diameter and 10 feet length, or as required by tree height. Stakes shall have a 10 inch tapered driving point.

B. Guy and Tie Wire: No. 12 gauge double wire twisted.

C. Support: Supports for staking shall be Treestrap, Model Number #3742T Hight Performance Biodegradable Tackstraps manufactured by GCS, Inc.

Treestrap
Manufacturer: GCS, Inc.
230 Center Street
North Wales, PA 19454
Tel: (800) 360-3584 / (215) 661-9070
Fax: (215) 661-9071
www.treestrap.com

2.5 HEADER BOARD:

B. Metal Headerboard: Metal Headerboard: Dura Edge Steel – 1/4” thick x 5” wide. Stakes to be 1/4 x 5” x 18” Steel, painted brown.

2.6 TRUNK GUARD:

A. Recycled content, polyethylene with ultraviolet inhibitors; 0.060-inch thick x 9-inches high x length for up to 4-inch diameter trunk.

1. Products:

a. Arborgard+ AG 9-4; Dimex LLC, 28305 State Route 7,Marietta, OH 45750, (800) 334-3776. (740) 374-3100.
b. Or equal.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas to receive plantings for compliance with requirements and for conditions affecting performance of Work in this Section.

B. Utilities and Structures located in planting areas. Verify that the locations of lighting, drainage and irrigation utilities, structures and other underground items have been clearly marked.

C. Sequencing: Do not commence planting until **soil testing,** site fine grading, soil import, and preparation has been completed and improved by Owner. Ensure all drainage swales and flow lines have been established and accepted prior to planting.

D. Inspect and approve all sprinkler work and finish grading prior to the start of shrub and ground cover planting as specified. Trees may be planted in advance of landscape irrigation system installation, provided approved by the Landscape Architect and that adequate provision is made in advance for interim watering.

E. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Protect structures, utilities, waterproofing, drainage structures, planter structures, pavements, and other facilities, and existing trees to remain from damage caused by planting operations. This includes maintaining all protective barriers in place unless directed otherwise by Owner. Vehicles and equipment shall not be parked, serviced, permit burning or operated within drip line of existing trees or within newly planted areas.

B. Remove existing plant materials and planting soils which are designated for removal in the documents.

C. Do not remove, sever or impact root structures of existing trees to remain in the preparation of sub-grade tree pit conditions. Conflicts with existing tree roots shall be brought to the attention to the Landscape Architect who may alter the required configuration to preserve or protect tree roots as they exist.

D. Test drainage structures and verify working condition. Verify acceptable condition to protection boards and other waterproofing components and notify Landscape Architect of any damage.

E. Weed Control:
Before and during preliminary and finish grading, dig out all weeds and grasses by roots and dispose of off-site. Prior to planting, eliminate any weeds present in delivered plant stock. Unless otherwise instructed by Owner. Grasses not of perennial type, except for Torpedo Grass and Nut Grass, less than 2-1/2” in. high and not bearing seeds, may be turned under. Perennial weeds and grasses to be removed include, but are not limited to, the following:

a. Nut Grass
b. St. Augustine
c. Puncture Vine

d. Morning Glory
e. Dog Fennel
f. Torpedo Grass
g. Common Bermuda Grass
h. Kikuyu Grass

Remove other noxious or invasive weeds.

Site shall be maintained weed-free throughout planting operations and until final acceptance by Owner. Submit a weed control program to Owner for approval with in 21 days after ward of Contract and prior to starting of work. Include all product information and frequency of weed control operations.

3.3 TREE PLANTING

A. Layout individual tree locations and areas for multiple plantings. Trees shall be staked prior to planting shrubs, grasses and herbaceous plants in order to establish the planting structure of the site. Stake locations, adjust locations when requested, and secure Landscape Architect acceptance before the start of planting work **including tree pit preparation.**

B. After digging plant hole but prior to installing tree, install Enhanced Soil Drainage according to Planting Soil specifications.

C. Tree root-ball shall be firmly placed on compacted setting bed and established at correct location, elevation and in plumb upright condition. Use temporary guy wires to secure tree in place as required during planting soil placement, to maintain proper setting location. Tree root ball must be set **above** finish grade so that the original root/trunk flair is at the proper relationship to finished planting soil grade **after compaction and settlement**.

D. All ropes and strings must be cut, non-biodegradable material must be removed and burlap folded back from the top one-quarter of root-ball. Do not remove burlap from lower sides or under root ball. Do not use planting stock if root-ball is cracked or broken before or during planting operation.

E. Only when placement of trees has been approved by Landscape Architect may back-fill planting soil be placed in excavated areas around root ball. Do not make saucer indentations.

F. Back-fill planting soils shall be placed in uniform six to eight inch lifts. Soil must be firmed at each lift interval by hand tamping as required to settle back fill and eliminate voids and air pockets.

G. Staking and Guying: Provide staking per Drawings.

H. Water thoroughly after planting, taking care not to cover plant crowns with displaced wet soil. Adjust finish grades and reset plants if settlement occurs. Place mulch and repeat watering procedure.

I. Wrap the trunks of trees immediately after planting with specified trunk guard material at base of tree. Uncoil and place around base of tree. Ensure complete protection with flared end in contact with ground. For larger trunk diameters, couple multiple sections together, securely interlocking tabs as recommended by manufacturer.

3.4 SHRUB AND HERBACEOUS PLANTING

A. Layout individual shrubs, grasses and herbaceous plants for multiple planting areas only after the location of trees have been planted. Shrub, Grasses, and Herbaceous groupings shall be marked out on the ground to establish the zones into which these plantings are to be planted. Once the zones are established individual shrubs, grasses and herbaceous plants shall be placed according to specified spacing and layout as indicated on drawings. Stake locations, outline area, and secure Landscape Architect's approval before starting planting. Make adjustments to layout as directed by Landscape Architect.

B Landscape Architect may request a full temporary placement of plants, still in their pots, according to plan or as directed for inspection by Landscape Architect prior to commencing with planting operation. Landscape Architect may adjust planting layout and spacing at his discretion during the planting operation.

C. Dig holes big large enough to allow spreading of roots, and backfill with planting soil. Work soil around root ball to eliminate air pockets. Do not make saucer indentations.

D. Water thoroughly after planting, taking care not to cover plant crowns with displaced wet soil. Adjust finish grades and reset plants if settlement occurs. Place mulch and repeat watering procedure.

3.6 MULCH PLACEMENT

A.
B. Place mulch; refer to Section 32 91 13.1through out planting areas and as indicated in construction drawings. Protect planting material from damage during and after installation of mulch.

3.7 INITIAL PRUNING:

A. Contractor shall prune trees and shrubs as directed by Landscape Architect and according to the Contract Documents.

1. Prune, thin and shape trees and shrubs according to standard horticultural practice. Prune trees to retain required height and spread. Unless otherwise directed by Landscape Architect, do not cut tree leaders; remove only injured or dead branches.

3.8 CLEAN-UP AND PROTECTION

A. During landscaping keep pavements clean and work area in an orderly condition. Protect landscaping from damage due to landscape operations, operations by other contractors and trades and trespassers. Treat, repair or replace damaged landscape work as directed.

3.9 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Disposal: Remove surplus soil and waste material, including excess subsoil, unsuitable soil. Tree boxes, Trash, and debris, and legally dispose of it off of the Owners property.

3.10 FINAL INSPECTION AND FINAL ACCEPTANCE

A. At the end of the warranty period the Landscape Architect and Owner will inspect all warranted work at the written request of the Contractor. The request shall be received 10 calendar days before the anticipated date for Final Inspection.

END OF SECTION 329300

City of Beverly Hills
North Santa Monica Boulevard Reconstruction Project
Pre-Bid RFI Log

RFI No.	Question	Answer	Date Submitted	Date Answered	Status
1	Please confirm that the non-collusion affidavit found on page P-20 states that the bidder must submit a resolution from the Board authorizing the officers to sign the affidavit and also one of the following a) signature of two corporate officers or b) copy of the bylaws?	Confirmed. Documents and sigantures as shown on the NonCollusion Affidavit are required.	5/19/2016	5/26/2016	**Closed**
2	On page P-22 the previous experience asks for projects that are within the last five (10) years. Is the City requesting projects within the last 5 years or the last 10 years?	The Contractor shall submit 5 projects over the last 10 years.	5/19/2016	5/26/2016	**Closed**
3	In the special provisions 2-3 part c; are sidewalks and pedestrian traffic included as part of the excavation which are require to be plated, cleaned up and, ready for traffic at the end of each work day?	Delete Section 2-3 Part C and Replace with "The Contractor must maintain a safe, tidy, and accessible path of travel for pedestrians at all times.	5/19/2016	5/26/2016	**Closed**
4	In the special provision 2-12 section 2-06; what are the fees for the Beverly Hills business license for which the contractor is responsible?	City of Beverly Hills business license is not required.	5/19/2016	5/26/2016	**Closed**
5	In the special provision 2-13 section 2.1.4 items 1 and 2 state that the Parking Structure Driveways shall begin at 2:00pm and shall be restored to traffic by 10:00am of the follow day. Is the contractor allowed to maintain a uninterrupted work operation during this time period or does the contractor have to halt operations at some point in the evening and begin again at 8:00am?	Night work outside of normal working hours is anticipated for the reconstruction of parking structure driveways.	5/19/2016	5/26/2016	**Closed**
6	Where will the Beverly Hills City construction trailer be located? May the contractor have its own construction trailer at the same location?	The Contractor shall provide a location for the City's construction trailer. The Contractor's trailer may be located at the same site.	5/19/2016	5/26/2016	**Closed**
7	Bid item #8 does not have an allowance amount in the bid proposal or specifications.	The allowance for bid item #8 shall be set to $300,000.	5/19/2016	5/26/2016	**Closed**
8	Bid item #27 CTB (as needed) what is the minimum Square footage per move-in. Will the intersections be excluded from the CTB item?	Bid Item No 27 will be deleted.	5/19/2016	5/26/2016	**Closed**
9	Bid item #4 description in specification 2-12.4 Provide PCMS ….. including 2 month maintenance. Is the PCMS turned over to the agency at the end of the project?	The maintenance period will be revised to 6 months to coincide with the term of the bid item. PCMS shall be taken away by the Contractor at the end of construction.	5/19/2016	5/26/2016	**Closed**

City of Beverly Hills
North Santa Monica Boulevard Reconstruction Project
Pre-Bid RFI Log

RFI No.	Question	Answer	Date Submitted	Date Answered	Status
10	While installing the storm drain laterals across the street only one lane in each direction can be maintained due to the depth of the pipe invert. Two lanes of traffic in each direction will be opened during non working hours. Is this acceptable?	Refer to Specification Section 2-13.2.1.5 Storm Drain Construction Phasing.	5/19/2016	5/26/2016	**Closed**
11	The landscape plans do not show the north side landscaping where the storm drain laterals are being installed (note 7 on plan sheets 31 - 36) from street to the alleys. What removal and/or restoration will be required? Has the city removed all trees that are in conflict with the proposed laterals?	A supplemental landscape plan will be issued as an addendum to the bid documents to clarify the intent of the bio swales. The Contractor shall walk the site to investigate conflicting hedges and trees that must be removed to facilitate storm drain construction work. The hedges and trees within Beverly Gardens Park are a very important part of the surrounding community, and the Contractor shall replace removed trees with mature replacements of the same plant type. Replacement trees shall be 36" box or larger unless otherwise approved by the City Engineer.	5/19/2016	5/26/2016	**Closed**
12	Does the city have a specification and/or information on the noise blanket required during night work?	Noise blankets shall be ENC STC-25 Accoustical Barrier Blanket by Behrens and Associates, Inc. or approved equal. See this website for additional information: http://www.environmental-noise-control.com/uploads/ENC%20STC-25%20Blanket%20Spec%20Sheet.pdf	5/19/2016	5/26/2016	**Closed**
13	Water main relocation at catch basins will they be relocated by others? There is approximately 6 locations.	The Contractor shall complete these relocations. A new Bid Item will be created for this work.	5/19/2016	5/26/2016	**Closed**
14	Retention – The City is showing 10%, public work contracting code states retention should be at 5%. Please clarify.	The retention will be 5% for this project.	5/19/2016	5/26/2016	**Closed**

City of Beverly Hills
North Santa Monica Boulevard Reconstruction Project
Pre-Bid RFI Log

RFI No.	Question	Answer	Date Submitted	Date Answered	Status
15	THREE PART QUESTION - Spec. Sheet SCR-22/Section 5-21 "Depth of Required Excavation" – States that after removing the required section, if unsuitable materials are found "said material shall be removed to a minimum of 6", at the discretion of the City Engineer. Backfill of the excavated portions shall be made with select material removed from other portions of work, provided said material is found suitable by the City Engineer." How are we to be paid for this item? It does state we will be paid by the CY, though the Bid Schedule for Bid Item No. 21 is shown as 550,000 CY. Please revise Bid Item No. 21 to reflect SF which is also show in the Specifications on Page 2-23, Section 2-12.21. If material is to be imported for this 6" section, how will that be paid for as well?	Where directed by the City Engineer, additional excavations will be paid per item 27, and placement of base backfill will be paid per ton based on the unit bid price of item 26.	5/19/2016	5/26/2016	**Closed**
16	We have worked on several projects with subgrade issues, due to the high traffic on this street & restrictive work area can we suggest to use some type of geogrid instead? If not please answer the following questions.	Bid Item No 27 will be deleted.	5/19/2016	5/26/2016	**Closed**
17	How many move ins? CTB Operation is a large endeavor, and isn't something that is just thrown together so it needs to be clearly defined so that we can cover our cost.	Bid Item No 27 will be deleted.	5/19/2016	5/26/2016	**Closed**
18	Does the City have the Mix Design Available, so that we know how much proposed Cement Powder is to be used?	Bid Item No 27 will be deleted.	5/19/2016	5/26/2016	**Closed**
19	Does the City want to use the powder mix, or the slurry mix? The powder mix is very dusty, and considering the high profile area you may want to go with the slurry mix.	Bid Item No 27 will be deleted.	5/19/2016	5/26/2016	**Closed**
20	Can the City please provide a typical section it CTB is to be used? Are we treating the CMB Section that we are to install or the Subbase Section underneath it? o If it is the Sub base section, are we required to excavate that area and replace it with base to cement treat or cement treat the soil (Or whatever is in the section)?	Bid Item No 27 will be deleted.	5/19/2016	5/26/2016	**Closed**

City of Beverly Hills
North Santa Monica Boulevard Reconstruction Project
Pre-Bid RFI Log

RFI No.	Question	Answer	Date Submitted	Date Answered	Status
21	Greenbook cure time for Subbase treatment is **7 DAYS** before traffic is allowed back on it**,** which will conflict with the City's impact limitations for the scopes of work. o Does the City want 7 days? a lot of times in high traffic areas you can get away with 3 DAYS but please provide what the City would like.	Bid Item No 27 will be deleted.	5/19/2016	5/26/2016	**Closed**
22	Are the Traffic Signals going to be on Recall? If not, will the City be requiring a Temp Traffic Signal Plan?	Traffic signals will be on recall. Contractor to notify and coordinate witih the City before scheduling any work that may impact traffic signal operations.	5/19/2016	5/26/2016	**Closed**
23	Page 2-41/Section 2-13.2.2 'RESTRICTIONS'/ Sub Section 'O': States "Temporary Striping using removable thermoplastic reflective tape (3M Stamark Wet Reflective Removable Tape Series 710 or equal)." Is there a reason why we are not using paint & markers for the temp? With using the required tape the striping contractor will still have to use a sandblaster to remove it, still labor intensive, and material cost substantially more than paint.	The phrase "using removable thermoplastic reflective tape (3M Stamark Wet Reflective Removable Tape Series 710 or equal)" will be deleted from the section of the specification.	5/19/2016	5/26/2016	**Closed**
24	Page 2-16/ Section 2-12.1 Item No. 1 'MOBILIZATION/DEMOBILIZATION" – States "The Payment for this item shall be spread over two monthly payments." Are you designating a percentage for Mob/ Demob? By two monthly payments, is that consecutive months? Or one month at the beginning of the project, and one at the end?	The cost of this item shall be designated 90% Mobilization and 10% Demobilization. The payment of 90% for mobilization shall be made over two consecutive months (45% each) and the payment of 10% for demobilization shall be made once demobilization is complete.	5/19/2016	5/26/2016	**Closed**
25	Bid Item No. 8 – Provide Traffic Service Officers (Allowance) – The City is designating this item as an allowance, can you please provide a stipulated amount for all contractors to use since it is to be use on a "as needed" basis.	The allowance for bid item #8 shall be set to $300,000.	5/19/2016	5/26/2016	**Closed**
26	The City initial had a yard available for the Contractor, though stated at the Pre-Bid meeting that they have not been able to find a location. Please confirm that the City does not have any space available for the Contractor to use to set up required jobsite amenities requested in the Specifications.	The Contractor shall provide a location for the City's construction trailer. The Contractor's trailer may be located at the same site.	5/19/2016	5/26/2016	**Closed**
27	If the Contractor is unable to find property to utilize as a yard, will the City be ok with having their "field office" in a leased office space?	The Contractor may provide a leased office space provided the leased space is within 1/2 mile of Beverly Hills City Hall.	5/19/2016	5/26/2016	**Closed**

City of Beverly Hills
North Santa Monica Boulevard Reconstruction Project
Pre-Bid RFI Log

RFI No.	Question	Answer	Date Submitted	Date Answered	Status
28	There is a syphon detail shown to be used when there are interfering water lines in the way of construction, how will the Contractor be paid for this work? Will it fall under Bid Item No. 3 'Contract Allowances'?	The Contractor shall complete these relocations. A new Bid Item will be created for this work. It will not be allocated to Contract Allowances.	5/19/2016	5/26/2016	**Closed**
29	Page 2-12/ Section 2-06 'BUSINESS LICENSE' – States "This license is available at NO COST to the Contractor. The Contractor SHALL PAY the fees for the business license." Are we paying for the business license or not?	City of Beverly Hills business license is not required.	5/19/2016	5/26/2016	**Closed**
30	Is this a federally Funded Project?	No.	5/19/2016	5/26/2016	**Closed**
31	Does it have any Davis Bacon Prevailing Wages?	No.	5/19/2016	5/26/2016	**Closed**
32	Do we need any Good Faith? To advertise for Sub contractors?	No.	5/19/2016	5/26/2016	**Closed**
33	How much are the Liquidated Damages?	As indicated in Specification Section 2-01.2.	5/19/2016	5/26/2016	**Closed**
34	Time of Completion?	As indicated in Specification Section 2-01.2.	5/19/2016	5/26/2016	**Closed**
35	Based on your traffic control during stage C1 & D1, it won't work. The present street width from curb flag to curb flag is approximate 58 feet. To place 3 lanes (2 west, 1 east) will take 33 feet plus 1 foot between edge of lane and edge of excavation, leaving 24 feet for construction, even though you are widening the road slightly this will not provide enough room to switch traffic from C1 to D1. You are not going to have any choice but to have 1 lane in each direction during these stages.	The City's goal is to maintain a minum of 3 lanes during the recostruction of the street's structural section. The Contractor is required to widen the street prior to the construction of stages C1 abd D1 of the work.	5/19/2016	5/26/2016	**Closed**

PROPOSAL FORM

for the

NORTH SANTA MONICA BOULEVARD RECONSTRUCTION PROJECT
(FROM WILSHIRE BOULEVARD TO DOHENY DRIVE)

within the City of
BEVERLY HILLS, CALIFORNIA

Beverly Hills, California
Date _____

To the Honorable City Council
Beverly Hills, California:

In compliance with the advertised notice inviting sealed proposals for the NORTH SANTA MONICA BOULEVARD RECONSTRUCTION within the City of Beverly Hills, and after having carefully examined the locations of the project and studied the Plans and Specifications prepared for this work, the undersigned hereby agrees to enter into a contract to furnish all labor, materials, equipment, parts, implements, and supplies needed to perform the contract work to the satisfaction and under the direction of the City Engineer of the City of Beverly Hills, said contract to be drawn in accordance with the provisions of the Plans, Specifications, Notice to Bidders, and all the applicable clauses of the "Standard Contractual Requirements for Public Improvements in the City of Beverly Hills, California", as adopted by the Department of Public Works on November 1, 1976.

If awarded the contract, the undersigned agrees to furnish the necessary bonds and insurance, as set forth in the above-mentioned Standard Contractual Requirements, within ten (10) days after the award of the contract.

Attached hereto is cash, or cashier's check, or a certified check in favor of the City of Beverly Hills, in an amount equal to at least ten percent (10%) of the total bid, or a bid bond for said amount on a form furnished by the City, with the understanding that said security shall be held by the City Clerk until the contract for doing the work has been entered into, and that said security shall be forfeited to the City as liquidated damages should the undersigned fail to enter into a contract and furnish the above-mentioned bonds and insurance within the ten (10) days specified, if awarded the contract, as the undersigned agrees that in the event of such failure, the actual amount of the damage to the City would be impractical and extremely difficult to determine. In the event cash, or cashier's check, or a certified check is furnished for the bid bond, then a letter is required from a bonding company stating that said company will furnish the necessary bonds, as specified in Paragraph 2-11 of the Standard Contractual Requirements, if the undersigned is awarded the contract. The undersigned is aware of the fact that such a letter must be from a bonding company acceptable to the City of Beverly Hills, and that all bids accompanied by cash, or cashier's check, or a certified check in lieu of the bid bond must be accompanied by such a letter in order to be considered.

The undersigned certifies to have a minimum of three consecutive years of current experience in

the type of work related to this project and that this experience is in actual operation of a firm with permanent employees performing a part of the work as distinct from a firm operating entirely by subcontracting all phases of the work.

The undersigned also certifies to be properly licensed by the State of California as a contractor to perform work of this specialty and further certifies to have been so licensed for the ten years immediately preceding the date of receipt of bids. In addition to the Contractors Qualification and Experience Statement submitted here with, the undersigned agrees to furnish the City additional satisfactory proof of ability to perform the work, as well as records of performance of similar jobs completed recently, if and when requested to do so by the City Engineer.

The undersigned agrees that the second paragraph of Section 3-2.2.1 “Contract Unit Prices”, of the Standard Specifications for Public Works Construction is deleted. The undersigned agrees that Section 3-2.2.1 “Contract Unit Prices”, of the Standard Specifications for Public Works Construction shall include the following: “Should any Contract item be deleted in its entirety, no payment will be made to Contractor for that Bid Item.”

The undersigned agrees that the insurance and bonding requirements set forth in Sections 3-13 and 2-11, respectively, of the City of Beverly Hills, Capital Assets Department, Standard Contractual Requirements can and will be fulfilled.

The undersigned hereby agrees to perform the work as described in Beverly Hills Standards, and in the Specifications prepared for this project, at the following prices, to wit:

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION AND UNIT PRICE WRITTEN IN WORDS	UNIT PRICE IN FIGURES	TOTAL IN FIGURES
Section 1: Miscellaneous				
1	1 LS	Mobilization/ Demobilization _____DOLLARS and_____CENTS Per Lump Sum	$_____	$ _____
2	1 LS	Traffic Control (Including Construction Signs and CMS) _____DOLLARS and_____CENTS Per Lump Sum	$_____	$_____
3	1 LS	Contract Allowance per section 2-12.3 _____DOLLARS and_____CENTS Per Lump Sum	$1,000,000.00	$1,000,000.00
4	12 EA	Tool Box Traffic Control Installation _____DOLLARS and_____CENTS Per Each Location	$_____	$_____

5	1 LS	Miscellaneous Construction Items or quantities not contained in the other bid items. _____DOLLARS and_____CENTS Per Lump Sum	$_____	$_____
6	1 LS	Prepare and Implement Storm Water Pollution Prevention Plan (SWPPP). _____DOLLARS and_____CENTS Per Lump Sum	$_____	$_____
7	152 days	Provide Vacuum Street Sweeper _____DOLLARS and_____CENTS Per Day	$_____	$_____
8	1 LS	Provide Traffic Services Officers (Allowance) _____DOLLARS and_____CENTS Per Lump Sum Allowance	$300,000.00	$300,000.00

Section 2: Civil and Site Improvements

9	65 EA	Remove and Reconstruct Curb Ramp (including adjoining Curb and Gutter and Detectable Warning Surface) _____DOLLARS and_____CENTS Per Each	$_____	$_____
10	13,319 SF	Remove and Reconstruct 4-inch PCC Sidewalk _____DOLLARS and_____CENTS Per Square Feet	$_____	$_____
11	13,033 LF	Remove and Reconstruct Non-Residential Integral Curb and Gutter _____DOLLARS and_____CENTS Per Linear	$_____	$_____

12	1,789 LF	Remove and Reconstruct Concrete Curb _____DOLLARS and_____CENTS Per Linear Foot	$_____	$_____
13	1,365 SF	Remove and Reconstruct Alley Approach _____DOLLARS and_____CENTS Per Square Foot	$_____	$_____
14	4,921 SF	Remove and Reconstruct Non-Residential Driveway Approach _____DOLLARS and_____CENTS Per Square Foot	$_____	$_____
15	640 SF	Remove and Reconstruct Longitudinal Alley Gutter _____DOLLARS and_____CENTS Per Square Foot	$_____	$_____

16	2,474 SF	Remove and Reconstruct Cross and Longitudinal Gutters		
		_____DOLLARS		
		and_____CENTS		
		Per Square Foot	$_____	$_____
17	7,695 SF	Remove and Reconstruct Bus Pad		
		_____DOLLARS		
		and_____CENTS		
		Per Square Foot	$_____	$_____
18	2 EA	Install Detectable Warning Surface		
		_____DOLLARS		
		and_____CENTS		
		Per Each	$_____	$_____
19	5 EA	Remove and Construct 4” Curb Drain in 8” Curb		
		_____DOLLARS		
		and_____CENTS		
		Per Each	$_____	$_____
20	1 EA	Remove and Construct Parkway Drain		
		_____DOLLARS		
		and_____CENTS		
		Per Each	$_____	$_____

21 550,000 SF Remove and Dispose of Existing Base, Subbase, and other Unclassified Materials

_____DOLLARS

and_____CENTS

Per Square Foot $_____ $_____

22 531,011 SF Remove and Dispose of Existing Asphalt Concrete

_____DOLLARS

and_____CENTS

Per Square Foot $_____ $_____

23 238,088 SF Remove and Dispose of Existing Portland Cement Concrete Pavement (this concrete is covered by asphalt overlay)

_____DOLLARS

and_____CENTS

Per Square Foot $_____ $_____

24 2,918 LF Construct Vegetated Bioswale (including underdrain)

_____DOLLARS

and_____CENTS

Per Linear Foot $_____ $_____

25 26,847 TON Install Asphalt Concrete (PG 70-10)

_____DOLLARS

and_____CENTS

Per Ton $_____ $_____

26 49,250 TON Install Crushed Miscellaneous Base (CMB)

_____DOLLARS

and_____CENTS

Per Ton $_____$_____

27 5,600 CY Remove and Dispose of Unsuitable Material

_____DOLLARS

and_____CENTS

Per Cubic Yard $_____ $_____

28 65 CY Install Portland Cement Concrete Pavement (10" thick)

_____DOLLARS

and_____CENTS

Per Cubic Yard $_____ $_____

29 14,500 SF Cold mill one foot wide asphalt pavement per one inch of vertical separation measured from the edge of gutter (as required up to 5' wide) and overly with ¾" asphalt mix.

_____DOLLARS

and_____CENTS

$_____$ _____

Per Square Foot

30 10,739 SF Cold Mill 2-inch Asphalt Concrete

_____DOLLARS

and_____CENTS

$_____$ _____

Per Square Feet

31	53 EA	Adjust Manholes to Grade		
		_____DOLLARS		
		and_____CENTS		
		Per Each	$_____	$_____
32	31 EA	Adjust Valves and Meters to Grade		
		_____DOLLARS		
		and_____CENTS		
		Per Each	$_____	$_____
33	15 EA	Adjust Survey Monuments to Finish Surface		
		_____DOLLARS		
		and_____CENTS		
		Per Each	$_____	$_____
34	1 EA	Relocate Fire Hydrant		
		_____DOLLARS		
		and_____CENTS		
		Per Each	$_____	$_____
35	27 EA	Remove Storm Drain and Sewer Structures		
		_____DOLLARS		
		and_____CENTS		
		Per Each	$_____	$_____

36	2,324 LF	Remove Storm Drain and Sewer Pipe (Size Per Plan) _____DOLLARS and_____CENTS Per Linear Foot	$_____	$_____
37	760 LF	Install 4-inch HDPE _____DOLLARS and_____CENTS Per Linear Foot	$_____	$_____
38	735 LF	Install 15-inch HDPE _____DOLLARS and_____CENTS Per Linear Foot	$_____	$_____
39	20 LF	Install 12-inch HDPE _____DOLLARS and_____CENTS Per Linear Foot	$_____	$_____

40 2,184 LF Install 18-inch RCP, 2000-D

_____DOLLARS

and_____CENTS

Per Linear Foot $_____ $_____

41 336 LF Install 24-inch RCP, 2000-D

_____DOLLARS

and_____CENTS

Per Linear Foot $_____ $_____

42 80 LF Install 30-inch RCP, 2000-D

_____DOLLARS

and_____CENTS

Per Linear Foot$_____ $_____

43 23 EA Remove and Construct Curb Opening Catch Basin

_____DOLLARS

and_____CENTS

Per Each $_____ $_____

44 22 EA Remove and Construct Curb Opening Catch Basin with Grating

_____DOLLARS

and_____CENTS

Per Each $_____ $_____

45	24 EA	Construct Brooks Catch Basin Number 1212 with Traffic Grates or Traffic Covers _____DOLLARS and_____CENTS Per Each	$_____	$_____
46	22 EA	Remove and Construct Junction Structure _____DOLLARS and_____CENTS Per Each	$_____	$_____

47	1 EA	Remove and Construct Transition Structures		
		_____DOLLARS		
		and_____CENTS		
		Per Each	$_____	$_____
48	16 EA	Construct Concrete Connections		
		_____DOLLARS		
		and_____CENTS		
		Per EA	$_____	$_____
49	57 EA	Construct Local Depression		
		_____DOLLARS		
		and_____CENTS		
		Per Each	$_____	$_____
			$_____	$_____
50	5 EA	Construct Manhole		
		_____DOLLARS		
		and_____CENTS		
		Per Each	$_____	$_____
51	130,000 SF	Cold Mill 2-inches Asphalt Concrete and Overlay with 2-inch Asphalt Concrete (West of Wilshire Boulevard)		
		_____DOLLARS		
		and_____CENTS		
		Per Square Foot	$_____	$_____

Section 3: Signing and Striping Improvements

52 28,579 SF Furnish and Install Decorative Crosswalk

_____DOLLARS

and_____CENTS

Per Square Feet $_____ $_____

53 1 LS Signing and Striping Improvements

_____DOLLARS

and_____CENTS

Per Lump Sum $_____ $_____

54 1 LS Furnish and Install Striping (West of Wilshire Boulevard)

_____DOLLARS

and_____CENTS

Per Lump Sum $_____ $_____

55 1 LS Furnish and Install Bus Shelter

_____DOLLARS

and_____CENTS

Per Lump Sum $_____ $_____

Section 4: Traffic Signal Improvements

56 1 LS Traffic Signal Modifications

_____DOLLARS

and_____CENTS

Per Lump Sum $_____ $_____

Section 5: Street Lighting Improvements

57 1 LS Street Lighting System

_____DOLLARS

and_____CENTS

Per Lump Sum $_____ $_____

Section 6: Landscaping Improvements

58 1 LS Landscaping Development

_____DOLLARS

and_____CENTS

Per Lump Sum $_____ $_____

59 1 LS Tree Stump Grinding (from Civic Center Drive to Donehy Drive)

_____DOLLARS

and_____CENTS

Per Lump Sum $_____ $_____

Section 7: Irrigation Improvements

60 1 LS Irrigation System

_____DOLLARS

and_____CENTS

Per Lump Sum $_____ $_____

Section 8: Water Pipe Relocation

61 100 LF Water Pipe Relocation12”

_____DOLLARS

and_____CENTS

Per Linear Foot $_____ $_____

62 100 LF Water Pipe Relocation 8”

_____DOLLARS

and_____CENTS

Per Linear Foot $_____ $_____

TOTAL BID PRICE FOR THE ENTIRE CONTRACT WORK for the cost of labor, materials, equipment parts, implements and supplies necessary to complete the project, as based on the City Engineer's estimate of quantities of work to be done (Summation of preceding subtotals of Items 1 through 60).

_____DOLLARS and
(Words)

_____CENTS $_____
(Words) (Figures)

All blank spaces appearing above must be filled in. In case of discrepancy between words and figures, the words shall prevail.

The undersigned hereby declares that the cost of all necessary items for completion of this project are included in the unit prices quoted, all incidentals have been taken into consideration even though said incidentals are not specifically listed in the specifications or shown on the plans. The undersigned is likewise aware of the fact that distances, quantities, and other estimated figures appearing on the plans or mentioned in the specifications or on this Proposal Form are only approximate and declares that the unit prices shown above for the various items of work are based on distances and quantities calculated as the result of actual measures performed at the site of the project.

LIST OF SUBCONTRACTORS - The undersigned is required to fill in the following blanks in accordance with the provisions of Section 4104 of the Public Contract Code of the State of California and Section 2-3 of the Standard Specifications.

Name Under Which Subcontractor is Licensed	License Number	Location of the Place of Business	Specific Description of Subcontract
______________________	____________	____________________	____________________
		____________________	____________________
			____________________
______________________	____________	____________________	____________________
		____________________	____________________
			____________________
______________________	___________	____________________	____________________
		____________________	____________________
			____________________
______________________	___________	____________________	____________________
		____________________	____________________
			____________________
______________________	___________	____________________	____________________
		____________________	____________________
			____________________

Subcontractors listed in accordance with the provision of Section 2-3 must be properly licensed under the laws of the State of California for the type of work, which they are to perform. Do not list alternate subcontractors for the same work.

The undersigned agrees to furnish proof that all contractors and subcontractors performing any work related to this improvement are complying with all the requirements of Social Security Legislation, both State and Federal, and also agrees to conform with the provisions of Sections 4100 to 4113, inclusive, of the Public Contract Code, as amended, concerning subcontractors and subcontracts.

NONCOLLUSION AFFIDAVIT TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID

State of California
County of _____

_____, being first duly sworn, deposes and says that he or she is_____ of _____the party making the foregoing bid that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true, and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

_____
Contractor

_____

_____

(Attach appropriate notary acknowledgments)

TE750013 12-12-89

Respectfully submitted,

Dated_____

FIRM NAME _____

SIGNATURE_____
Bidder

ADDRESS _____

_____

TELEPHONE: BUSINESS _____

RESIDENCE _____

CONTRACTOR'S LICENSE NO._____CLASS_____ EXPIRATION DATE_____

Bidder is *_____

If a partnership, names of partners
If a corporation, names of President **or** Vice President, **and** the Secretary **or** Assistant Secretary

NAME	ADDRESS
_____	_____
_____	_____
_____	_____

I (we) hereby state and declare under the penalty of perjury under the laws of California, that the representations made herein are true and correct.

Executed on_____20____at_____California

*By: _____

*By: _____

Title: _____

Title: _____

* Please state whether the bidder is an individual, a partnership, a corporation, or an individual doing business under a fictitious name. If the bidder is a corporation, the following is required: 1) signatures of two corporate officers; or 2) a certified copy of the corporation bylaws, and a resolution of the Board of Directors which gives authority to the officers signing this agreement to execute contracts on behalf of the corporation. Also, refer to Paragraph 2-01 of the Standard Contractual Requirements.

CONTRACTORS QUALIFICATION AND EXPERIENCE STATEMENT

The City reserves the right, after reviewing the qualification statements, to reject any and all bids, and to award the Bid to the lowest qualified and responsible Bidder. The following qualification statements are intended for the purpose of determining the Bidder qualified to provide successful performance on the type of work required to construct this Project.

The undersigned certifies under oath the truth and correctness of all statements and of all answers to questions made hereinafter.

A. Staff Roster/Functions

List key members of your staff who will be assigned to or responsible for Work as a team member on this Project and provide the following information for each individual:

	Project Executive	**Project Superintendent**	**Project Manager**
Name			
Title or Function			
Years with Company			
Years in Position			
Projects Completed – a.			
b.			
c.			
d.			
e.			
Projects Completed for: a.			
b.			
c.			
d.			
e.			

B. Construction Experience

Bidders participating in this publicly bid contract must have completed at least five projects similar in nature in the last five (10) years, each having an in place value of at least $ 5 Million Dollars. List these projects below.

Owner: (1) _____

Project Location: _____

Type of Project: _____

Phone Number: _____

Contact Person: _____

Owner: (2) _____

Project Location: _____

Type of Project: _____

Phone Number: _____

Contact Person: _____

Owner: (3) _____

Project Location: _____

Type of Project: _____

Phone Number: _____

Contact Person: _____

Owner: (4) _____

Project Location: _____

Type of Project: _____

Phone Number: _____

Contact Person: _____

Owner: (5) _____

Project Location: _____

Type of Project: _____

Phone Number: _____

Contact Person: _____

C. List at least two construction projects in excess of $ 5 Million Dollars your organization has in progress or completed within the last 5 years.

Owner: (1) _____

Project Location: _____

Type of Project: _____

Phone Number: _____

Contact Person: _____

Date Completed: _____

Owner: (2) _____

Project Location: _____

Type of Project: _____

Phone Number: _____

Contact Person: _____

Date Completed: _____

Owner: (3) _____

Project Location: _____

Type of Project: _____

Phone Number: _____

Contact Person: _____

Date Completed: _____

Owner: (4) _____

Project Location: _____

Type of Project: _____

Phone Number: _____

Contact Person: _____

Date Completed: _____

Owner: (5) _____

Project Location: _____

Type of Project: _____

Phone Number: _____

Contact Person: _____

Date Completed: _____

_____

Signature Date

_____

Name and Title of Signing Officer

_____

Company Name

_____

Business address

_____

Telephone Fax