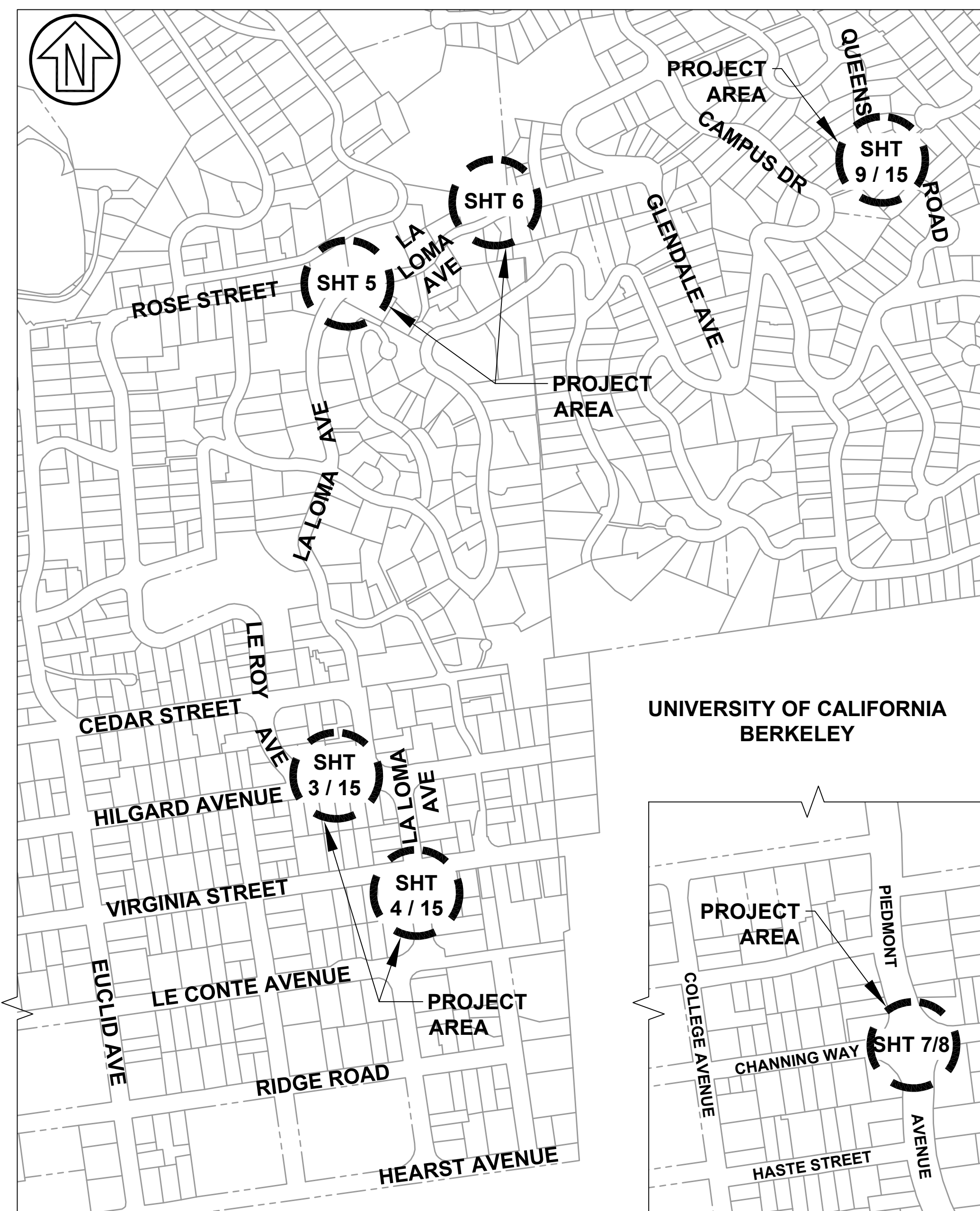
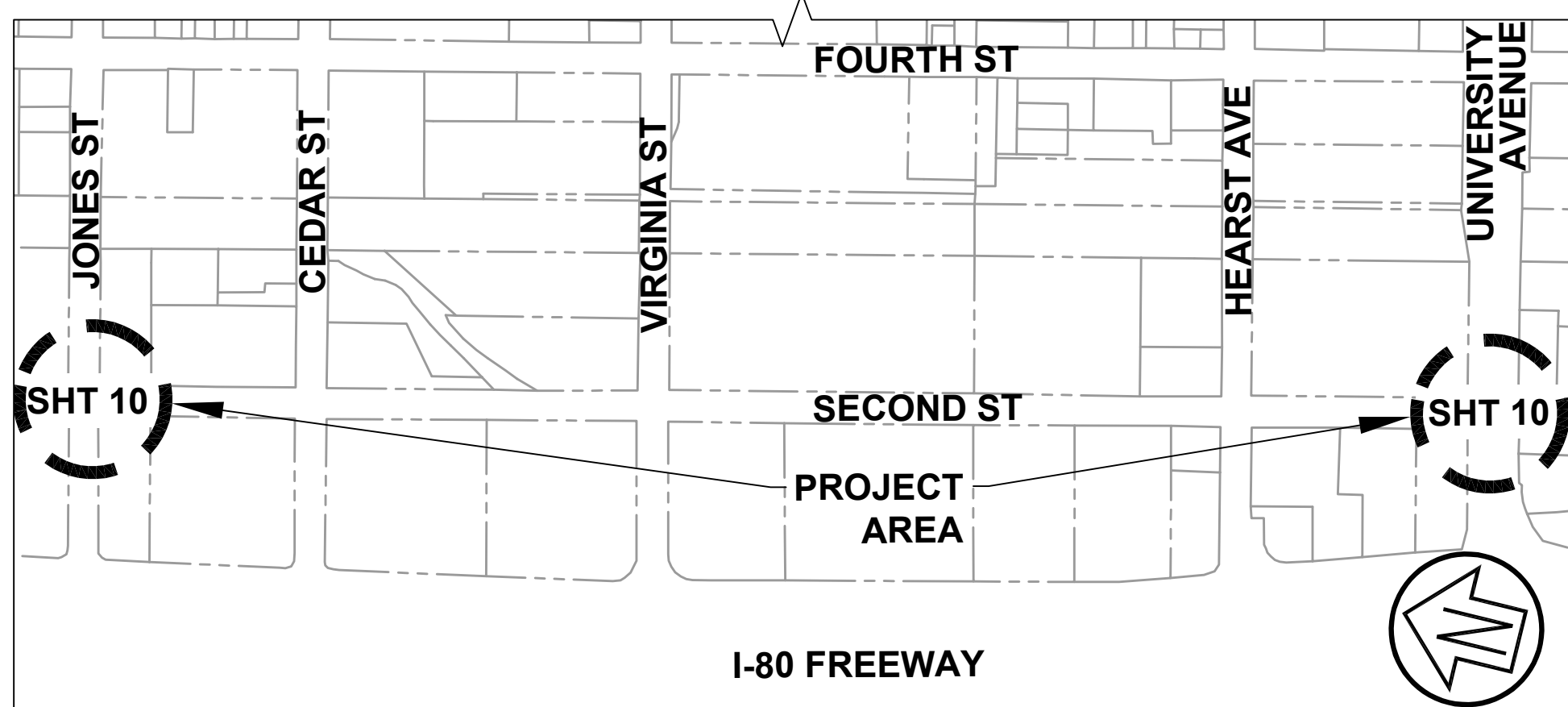
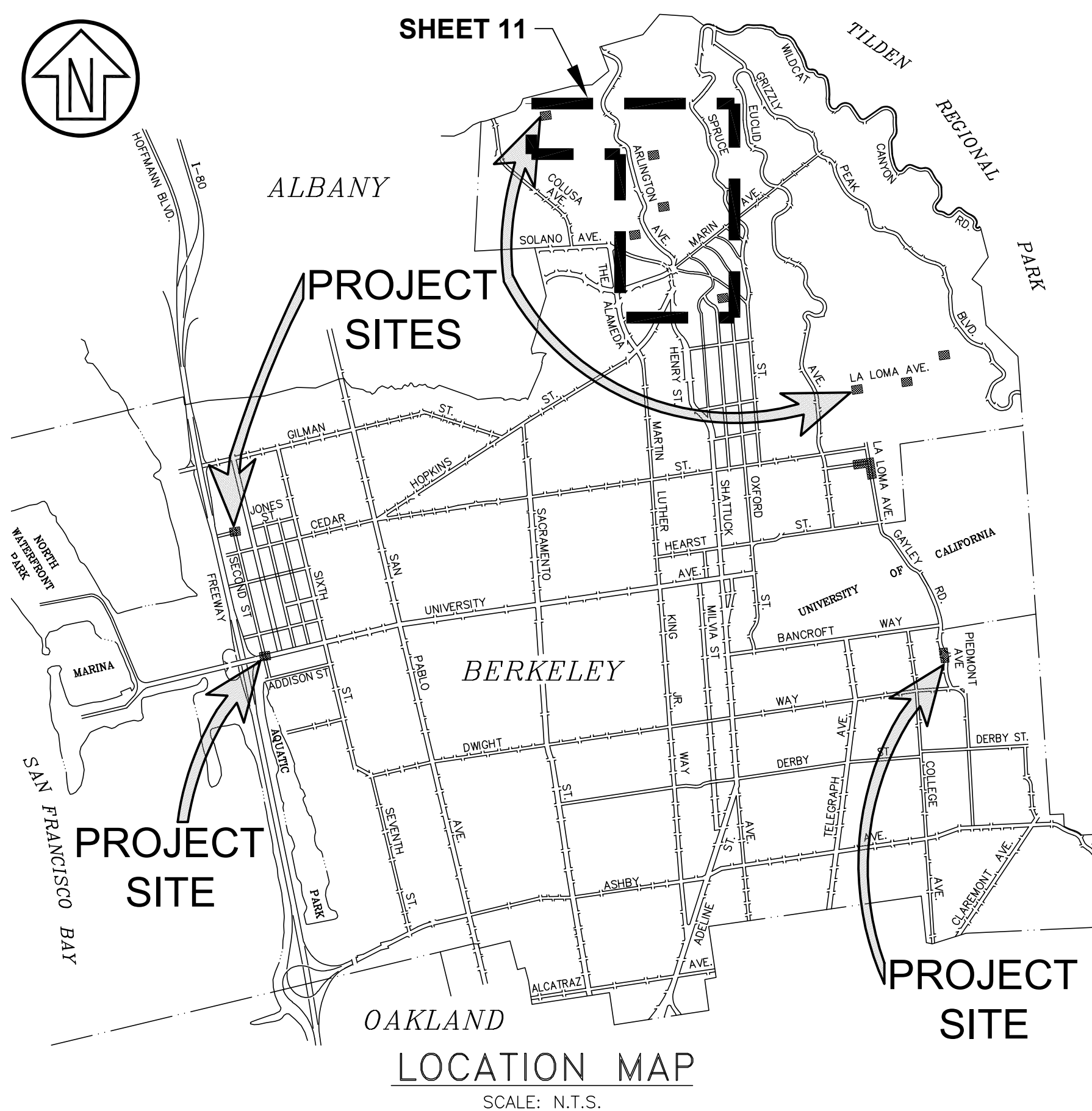


FY 2023 RETAINING WALL AND STORM DRAIN IMPROVEMENT PROJECT SPECIFICATION NO. 23-11616-C (RE-ISSUED) PACKAGE A



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2. ABBREVIATIONS, GENERAL NOTES & LEGEND
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19. STRUCTURAL DETAILS
20. EROSION CONTROL PLAN
21. POLLUTION PREVENTION PLAN

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PROJECT MANAGER: _____ DATE _____
DEPICTION OF MONUMENTS: _____ DATE _____
SURVEY CHIEF OF PARTY _____
WATERSHED REVIEW: _____ DATE 4/11/24

0 1 2 3
FOR REDUCED PLANS - ORIGINAL SCALE IS IN INCHES

SUBMITTED: *[Signature]* DATE 04/04/24
REGISTR. C67152
EXP. 09/30/2024
SUPERVISING ENGINEER
APPROVED: *[Signature]* DATE 4/11/24
R.C.E. C62524
CITY ENGINEER EXP. 9/30/25

DESIGN - JD
DRAWN - DC
CHECK - JD
AS BUILT _____
HORIZ. AS NOTED
VERT. _____
BOOK _____
DATE 03/22/2024

CITY OF BERKELEY
DEPARTMENT OF PUBLIC WORKS
FY 2023 RETAINING WALL AND
STORM DRAIN IMPROVEMENT PROJECT
COVER SHEET

PLAN 8278
FILE 503-636
T1
SHEET 1 OF 21

REVISION	MARK	DATE	DESCRIPTION	APPROVAL

ABBREVIATIONS

- AB - AGGREGATE BASE
- AC - ASPHALT CONCRETE
- AD - AREA DRAIN
- BC - BEGINNING OF CURVE
- B/L - BASE LINE
- BSW - BACK OF SIDEWALK
- CAMUTCD - CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
- CB - CATCH BASIN
- C&G - CURB AND GUTTER
- CC - CAST IRON
- ¢ - CENTERLINE
- CP - CONTROL POINT
- DI - DROP INLET
- DEP - DEPRESSED
- DESC - DESCRIPTION
- DWY - DRIVEWAY
- EC - END OF CURVE
- EG - EXISTING GRADE
- EP - EDGE OF PAVEMENT
- EL - ELEVATION
- EX - EXISTING
- FG - FINISH GRADE
- F/L - FLOWLINE
- FS - FINISH SURFACE
- FSP - FLATTENED STEEL PIPE
- GB - GRADE BREAK
- HC - HANDICAP
- HDPPE - HIGH DENSITY POLYETHYLENE PIPE
- HP - HIGH POINT
- HSS - HOLLOW STRUCTURAL SECTION
- INV - INVERT
- JB - JUNCTION BOX
- JP - JOINT POLE
- LC - LEVELING COURSE
- LF - LINEAR FEET
- LP - LOW POINT
- LOW - LIMIT OF WORK
- MH - MAINTENANCE HOLE
- MON - SURVEY MONUMENT
- NG - NATURAL GROUND
- NTS - NOT TO SCALE
- PB - PULL BOX
- PCC - PORTLAND CEMENT CONCRETE
- PC - POINT OF COMPOUND CURVE
- POC - POINT ON CURVE
- PVC - POLYVINYL CHLORIDE PIPE
- PRC - POINT OF REVERSE CURVE
- PVC - POLY VINYL CHLORIDE PIPE
- R&R - REMOVE AND REPLACE
- RCP - REINFORCED CONCRETE PIPE
- RRPM - RETRO-REFLECTIVE RAISED PAVEMENT MARKER
- RW - RIGHT OF WAY
- SS - SANITARY SEWER
- SSD - SEE STRUCTURAL DRAWINGS
- SSMH - SANITARY SEWER MAINTENANCE HOLE
- SD - STORM DRAIN
- SDCO - STORM DRAIN CLEAN OUT
- SDMH - STORM DRAIN MAINTENANCE HOLE
- SF - SQUARE FEET
- SSMH - STANITARY SEWER MAINTENANCE HOLE
- SW - SIDEWALK
- TC - TOP OF CURB
- TS - TRAFFIC SIGNAL
- UNO - UNLESS NOTED OTHERWISE
- VIF - VERIFY IN FIELD

SYMBOLS LEGEND

EXISTING		PROPOSED	
	Ex. Water/Gas Meter		BOLLARD
	Ex. Water/Gas Valve		SIGN
	Ex. Fire Hydrant		TREE / TREE TO BE REMOVED (GRIND STUMP TO GRADE, UNO)
	Ex. Utility Pole		STORM DRAIN MAINTENANCE HOLE
	Ex. Utility Pole w/Light		STORM DRAIN MAINTENANCE HOLE
	Ex. Tree		DETAIL NO. SHEET NO.
	Ex. Miscellaneous Survey Monument		
	Ex. Survey Well Monument		
	Ex. Benchmark		
	Ex. Control Point		
	Ex. Misc. Survey Point		
	Control Point Set		
	Ex. Light-Post Mounted		
	Ex. Power Pole with Guy		
	Ex. Sanitary Sewer Clean Out		
	Ex. Sanitary Sewer Maintenance hole		
	Ex. Storm Drain		
	Ex. Pullbox		
	Ex. BOLLARD		
	Ex. SIGN		

LINETYPES

EXISTING		PROPOSED
	CONTOUR - MAJOR	
	CONTOUR - MINOR	
	FENCE	N/A
	GAS LINE	N/A
	ELECTRICAL LINE(S)	N/A
	WATER LINE	N/A
	LIMITS OF CONSTRUCTION	
	PROPERTY / LOT LINE	N/A
	RETAINING WALL	
	SANITARY SEWER	N/A
	STORM DRAIN	
	SUB-DRAIN (PERFORATED)	
	TIES	
	TREE DRIPLINE	N/A

LEGEND

	SYMBOL DENOTES RETAINED WALL HEIGHT (DECIMAL FEET). WHERE WALL HEIGHT VARIES, MAX HEIGHT IS INDICATED. UNLESS NOTED ON PLAN, ALL TOP OF WALLS (TW) ARE INTENDED TO BE FLAT. FINISHED SURFACE (FS) CALLOUTS INDICATE THE FINISH SURFACE AT THE TOE OF WALL AND DO NOT ACCOUNT FOR THE GRADE DIFFERENCE BETWEEN FINISH SURFACE AND TOP OF FOOTING.
	AC PLUG (8" TYP)
	SELECT ENGINEERED FILL OR DRAIN ROCK AS APPROVED BY THE ENGINEER
	SAWCUT

CONSTRUCTION NOTES:

- SAWCUT EXISTING PAVEMENT AT LIMIT OF WORK, TYPICAL.
- PROTECT AND PRESERVE ALL SURVEY MONUMENTS. SEE MONUMENT PRESERVATION NOTE.
- PROTECT ALL DRAINAGE AND SEWAGE STRUCTURES AND PIPES FROM INFILTRATION OF ALL CONSTRUCTION DEBRIS FOR THE DURATION OF THE WORK.

GENERAL NOTES:

- ALL DRAWINGS AND SPECIFICATIONS ARE CONSIDERED PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE START OF CONSTRUCTION SO THAT A CLARIFICATION MAY BE ISSUED. WORK NOT CONFORMING TO THE CONTRACT DOCUMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT NO EXPENSE TO THE CITY.
- UTILITIES AS SHOWN CONFORM TO AVAILABLE RECORD DATA. THE EXISTENCE, LOCATION AND CHARACTERISTICS OF UNDERGROUND UTILITY INFORMATION SHOWN ON THESE PLANS HAVE BEEN OBTAINED FROM A REVIEW OF AVAILABLE RECORD DATA. NO REPRESENTATION IS MADE AS TO THE ACCURACY OR COMPLETENESS OF SAID UTILITY INFORMATION. IT IS THE CONTRACTOR'S RESPONSIBILITY REFERENCE ALL SURFACE UTILITIES PRIOR TO COMMENCING WORK AND TO VERIFY LOCATION AND DEPTHS BY POTHOLING OF ALL UTILITIES WITH APPROPRIATE AGENCIES, AND TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT OF RECORD OR NOT SHOWN ON THESE PLANS. ANY CONFLICTS SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ADEQUATE DRAINAGE OF THE SITE, DURING INTERIM CONDITIONS OF CONSTRUCTION.
- CONTRACTOR SHALL PROVIDE ALL MATERIAL, LABOR, EQUIPMENT, FOR INSTALLATION, IMPLEMENTATION, AND MAINTENANCE OF ALL SURFACE WATER POLLUTION PREVENTION MEASURES THROUGHOUT THE FULL EXTENT OF THE PROJECT. SURFACE WATER IS CLASSIFIED AS ANY BODY OF WATER ABOVE GROUND.
- OVERHEAD UTILITY SERVICE ARE SHOWN APPROXIMATELY ON THE PLANS. THE CONTRACTOR SHALL INVESTIGATE THE SITE AND BE AWARE OF LIMITED OVERHEAD CLEARANCES.
- ALL MAINTENANCE HOLES, CLEANOUTS AND WATER VALVES SHALL BE ADJUSTED TO GRADE WITHIN 48 HOURS OF PAVING. ALL PAVING SHALL BE COMPLETED WITHIN 24 HOURS OF RAISING THE UTILITY TO GRADE.
- ALL STRIPING SHALL BE THERMOPLASTIC UNLESS OTHERWISE NOTED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MEASURE AND MARK EXISTING STRIPING, PAVEMENT MARKINGS, AND RAISED PAVEMENT MARKERS PRIOR TO AND DURING THE STREET WORK. LAYOUT MARKINGS SHALL BE LAID OUT IN ADVANCE OF FINAL STRIPING. ALL LAYOUT MARKINGS SHALL BE APPROVED IN WRITING BY THE CITY ENGINEER. THE CONTRACTOR SHALL PROVIDE A ONE WEEK TIME PERIOD FOR REVIEW OF LAYOUT MARKINGS. STRIPING CHANGES SHALL BE APPROVED BY THE CITY ENGINEER.
- PAVEMENT MARKINGS DISTURBED, DAMAGED IN ANY FORM, OR TO ANY DEGREE WHILE THE CONTRACTOR HAS CUSTODY OF THE SITE SHALL BE REPLACED IN THEIR ENTIRETY AT CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL CONTACT CITY ARBORIST AT LEAST 48 HOURS IN ADVANCE OF PERFORMING WORK UNDER THE DRIP LINE OF EXISTING TREES AND WHEN EXCAVATIONS IS PLANNED WITHIN THE ROOT SYSTEM OF THE TREE. THE CITY ARBORIST WILL REVIEW EACH LOCATION ON A CASE-BY-CASE BASIS TO CONFIRM THE ALLOWABLE EXTENT OF ROOT AND BRANCH PRUNING REQUIRED. CONTRACTOR SHALL ADHERE TO CITY SPECIFICATIONS AND RECOMMENDATIONS FOR TREE PRESERVATION.
- TREE PROTECTION - PROVIDE FOR WRAPPING TREES, KEEPING EXPOSED ROOTS MOIST, AND USE OF AIR TOOLS FOR EXCAVATING. MEET WITH CITY ARBORIST BEFORE ANY WORK IS DONE.

PRESERVATION OF SURVEY MONUMENTS

ALL CITY OF BERKELEY MONUMENTS LOCATED WITHIN THE PROJECT AREA MUST BE REFERENCED, PRIOR TO WORK COMMENCING, BY A LICENSED LAND SURVEYOR AS REQUIRED BY SECTION 8771 OF THE BUSINESS AND PROFESSIONS CODE. CORNER RECORDS OF THIS WORK MUST BE SUBMITTED FOR FILING TO BOTH THE COUNTY SURVEYOR OF ALAMEDA COUNTY, AND THE CITY OF BERKELEY PUBLIC WORKS DEPARTMENT, ENGINEERING DIVISION, SURVEY SECTION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PRESERVATION OF EXISTING SURVEY MONUMENTS, BENCHMARKS, REFERENCE MARKS AND STAKES. SHOULD ANY SURVEY MONUMENTS, BENCHMARKS, REFERENCE POINTS, OR STAKES BE DAMAGED OR DESTROYED DURING THE PERFORMANCE OF THIS WORK, THE CONTRACTOR SHALL REPLACE SAID ITEMS PER CITY STANDARDS IN ACCORDANCE WITH THE SPECIAL PROVISIONS AND CONTACT A CITY OF BERKELEY, SURVEY SECTION, CHIEF OF PARTY FOR FINAL INSPECTION AND ACCEPTANCE OF THE WORK.

SURVEY CONTROL POINTS

DESIGNATION	NORTHING	EASTING	ELEVATION	DESCRIPTION
CITY MONUMENTS				
B0593	2145831.429	6046547.262	94.26	BRASS PIN WELL MON.
EXISTING CONTROL USED				
102	2149339.4301	6056113.9293	1039.53	FND RBC BLACK LS 5252
103	2149368.4056	6056158.9526	1055.65	CP FND RBC MORAN
10070	2143113.648	6056062.463	343.80	CP-MAG
CONTROL SET				
3	2147340.877	6054433.955	494.83	CP MN
5	2147332.909	6054395.543	486.22	CP SPK
8	2147009.174	6054559.943	473.09	CP MN
9	2146973.546	6054562.326	460.37	CP MN CURB
12	2148927.597	6054322.746	676.79	CP SPK
18	2149219.507	6054875.233	753.02	CP MN
100	2149348.1816	6056113.2633	1040.43	CP MN

NOTE:

- MONUMENT B0593 AND CONTROL POINTS 9, 12, & 18 ARE OUTSIDE OF THE LIMITS SHOWN ON THESE PLANS.

SURVEY NOTES

- DISTANCES SHOWN ARE IN FEET AND DECIMALS THEREOF.
- CONTRACTOR SHALL PROTECT IN PLACE ALL CITY MONUMENTS. SEE PRESERVATION OF SURVEY MONUMENT NOTES.

HILGARD AVENUE-LA LOMA AVENUE

- HORIZONTAL DATUM IS NORTH AMERICAN DATUM OF 1983 (NAD 83) PER CALIFORNIA REAL TIME NETWORK (CRTN), EPOCH 2017.5
- VERTICAL DATUM IS NORTH AMERICAN DATUM OF 1988 (NAVD88) PER CALIFORNIA REAL TIME NETWORK (CRTN), EPOCH 2017.5
- MOUNT POINT P224 (SIBLEY VOLC) WAS USED AND SURVEY POINTS WERE ROTATED HORIZONTALLY AND BUMPED VERTICALLY ACCORDINGLY IN ADDITION TO A 5.89' LOWERING IN ELEVATION TO GET ON BERKELEY'S DATUM SYSTEM

PIEDMONT AVENUE

- BENCHMARK, BEING A FOUND 3/8" BRASS PIN IN WELL MONUMENT (CITY DESIGNATION B0593) AT THE INTERSECTION OF ACTON STREET AND VIRGINIA STREET. ELEVATION = 94.26' (COB). THE ORTHOMETRIC ELEVATIONS SHOWN HERON ARE BASED ON THE CITY OF BERKELEY DATUM.
- THE BASIS OF BEARING FOR THIS SURVEY IS THE CALIFORNIA COORDINATE SYSTEM, ZONE 3, NAD 83, EPOCH 2017.50 AS DETERMINED LOCALLY BY A LINE BETWEEN CONTINUOUS GLOBAL POSITIONING SYSTEMS (CGPS) STATION P181 AND STATION SR81; BEING SOUTH 84°05'34" East AS DERIVED FROM GEODETIC VALUES PUBLISHED BY THE CALIFORNIA SPATIAL REFERENCE CENTER (CSRC).

QUEENS ROAD

- FIELD SURVEY AT QUEENS ROAD WAS PERFORMED BY MORAN ENGINEERING, INC. IN JULY 2018. ELEVATIONS ARE BASED ON THE CITY OF BERKELEY DATUM. THE BENCHMARK FOR THIS SURVEY IS THE PIN MONUMENT IN QUEENS ROAD DESIGNATED "B1440," TAKEN AS ELEVATION = 1037.51 FEET PER CITY OF BERKELEY RECORDS. THE BEARINGS FOR THIS SURVEY ARE BASED ON THE BEARINGS SHOWN ON THE MAP OF BERKELEY VIEW TERRACE (12 M 62).



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 121 Park Place, Richmond, CA 94801
 Tel: 415.883.9850 Fax: 415.883.9835
 http://www.cswst2.com

PROJECT MANAGER: _____ DATE _____
 SURVEY CHIEF OF PARTY _____
 WATERSHED REVIEW: _____ DATE _____

0 1 2 3
 FOR REDUCED PLANS - ORIGINAL SCALE IS IN INCHES

DEPICTION OF MONUMENTS: _____ DATE _____
 SURVEY CHIEF OF PARTY _____
 WATERSHED REVIEW: _____ DATE _____

SUBMITTED: _____ DATE _____
 SUPERVISING ENGINEER _____
 EXP. _____
 APPROVED: _____ DATE _____
 CITY ENGINEER _____

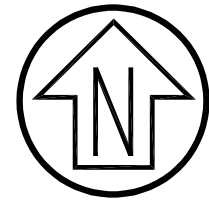
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 REGISTR. _____
 EXP. _____
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 CHECK: _____ JD _____
 AS BUILT: _____
 DATE: 03/22/2024

CITY OF BERKELEY
 DEPARTMENT OF PUBLIC WORKS

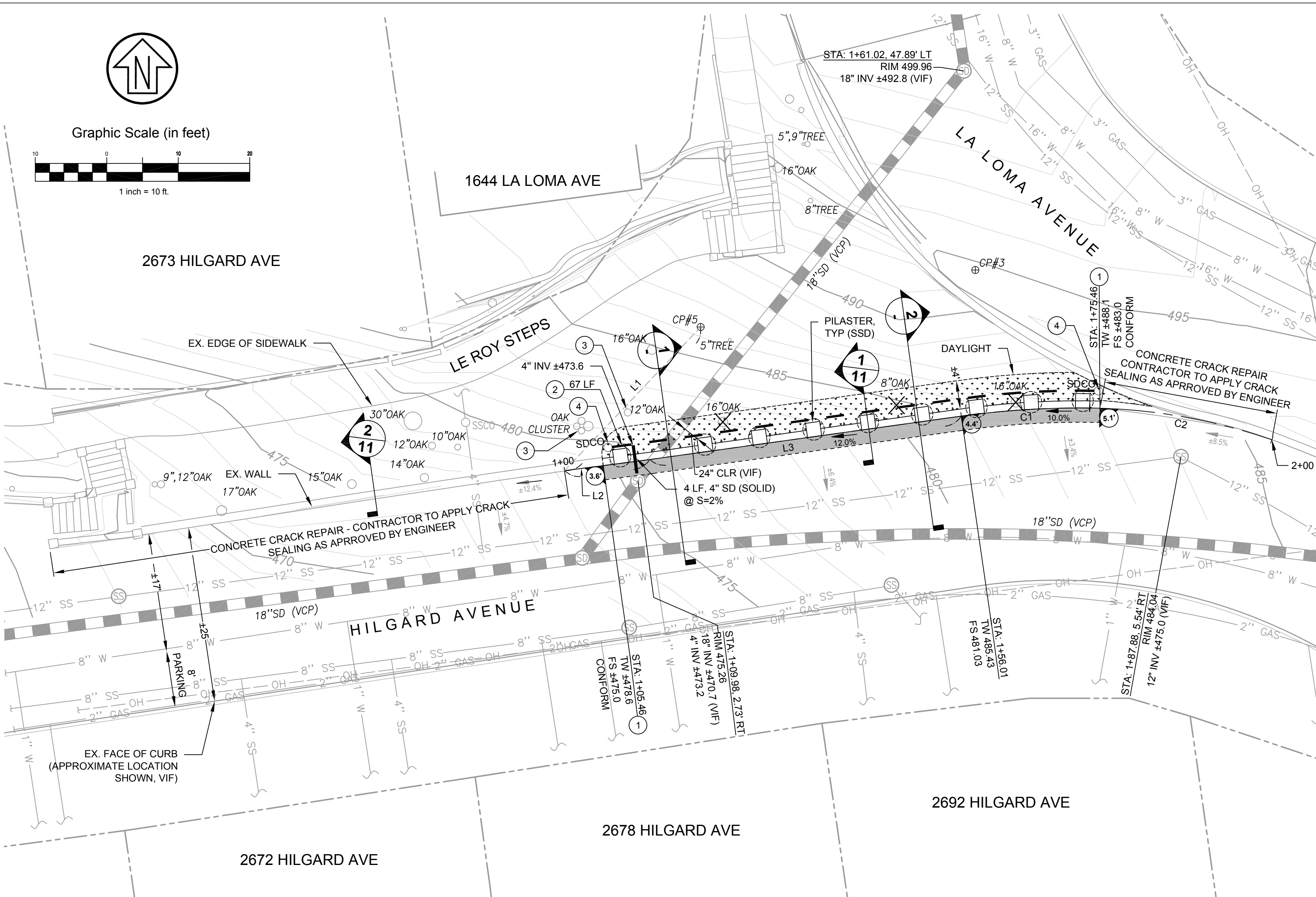
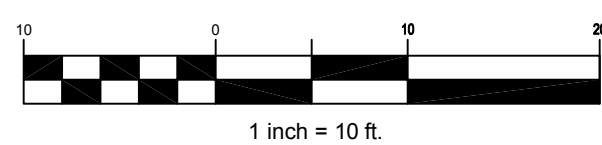
FY 2023 RETAINING WALL AND STORM DRAIN IMPROVEMENT PROJECT
 ABBREVIATIONS, GENERAL NOTES, & LEGEND

PLAN 8278
 FILE 503-636
 T2
 SHEET 2 OF 21

APPROVAL
DATE
MARK
REVISION
DESCRIPTION



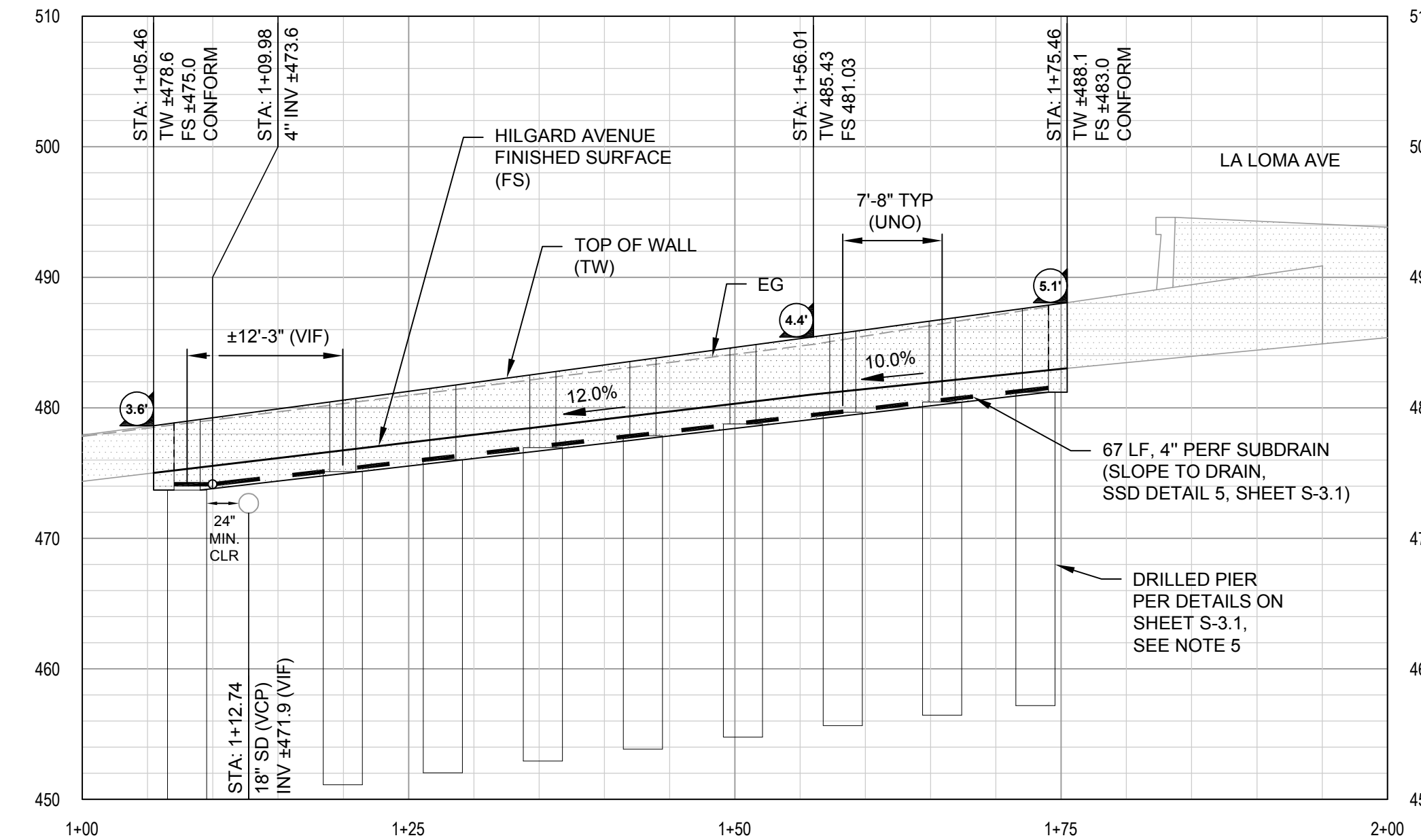
Graphic Scale (in feet)



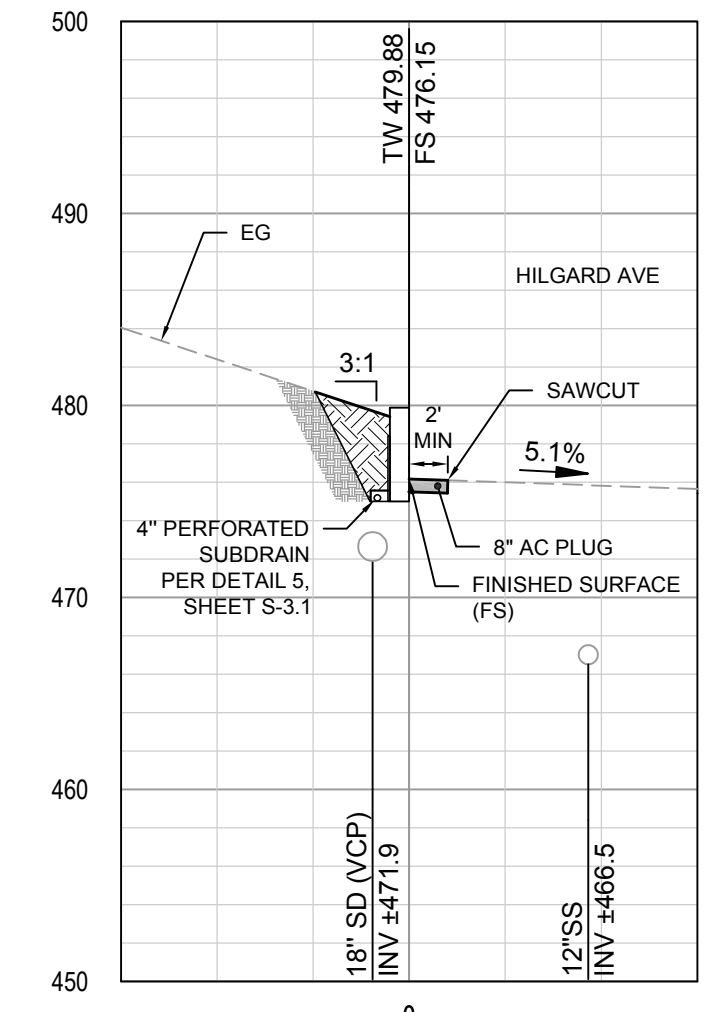
PLAN
SCALE: 1" = 10'

HILGARD AVE ALIGNMENT						
TAG	STATION	NORTHING	EASTING	DELTA / BEARING	DISTANCE	RADIUS
L2	1+00.00	2147312.82	6054376.50	N82° 32' 51"E	12.03	
L3	1+12.03	2147314.38	6054388.42	N82° 04' 49"E	43.98	
C1	1+56.01	2147320.44	6054431.99	N86° 22' 52"E	18.02	120.00
C2	1+74.03	2147321.58	6054449.95	S80° 06' 13"E	25.97	81.00

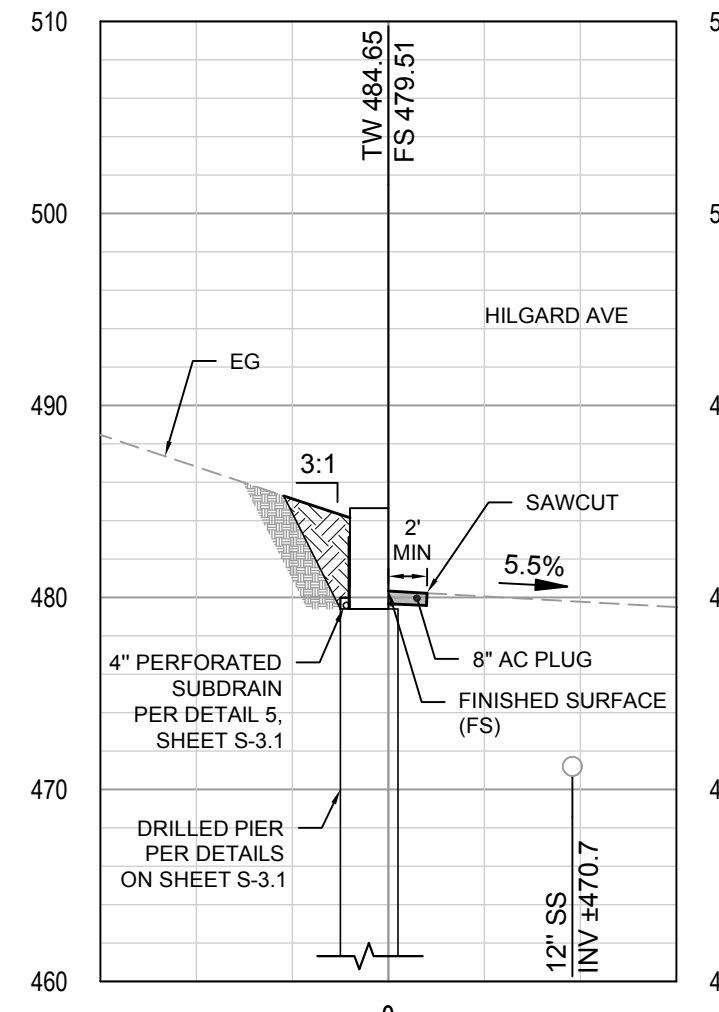
LINE TABLE		
TAG	BEARING	DISTANCE
L1	S43°28'43"W	27.68'



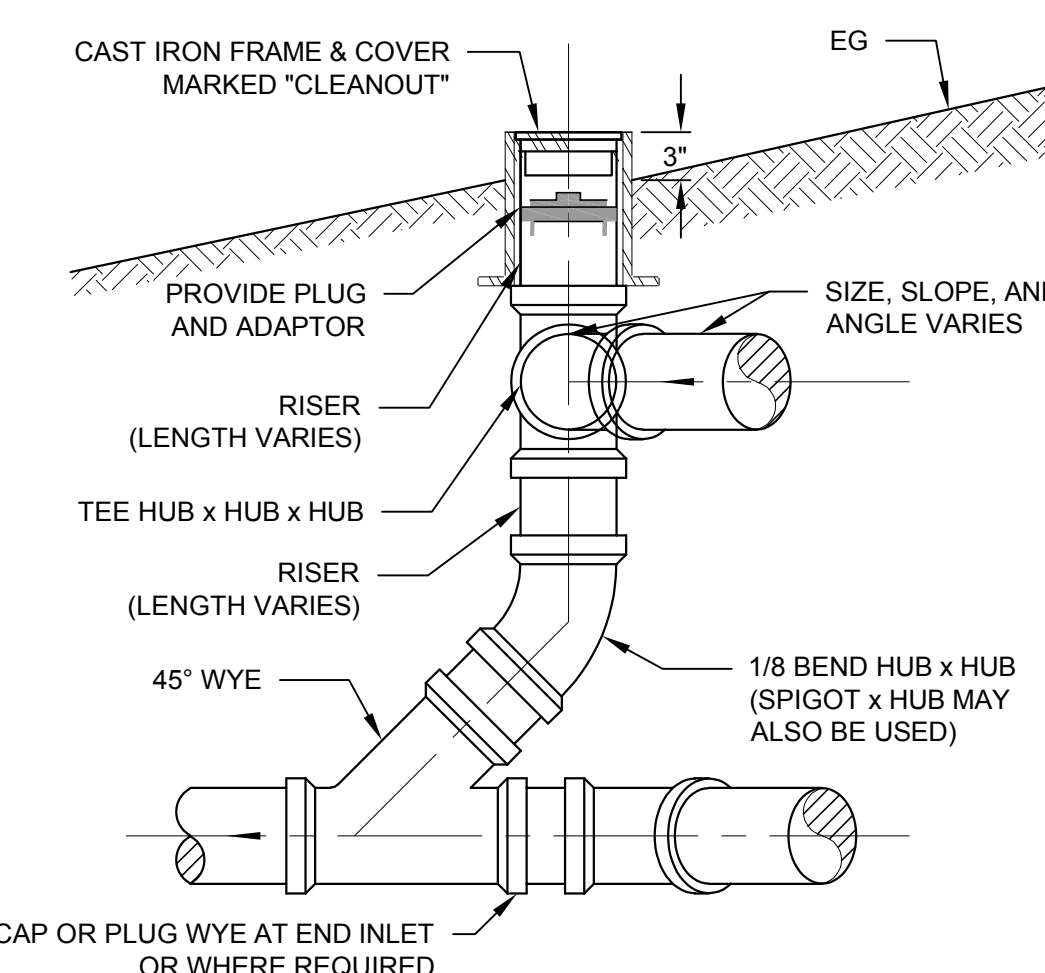
HILGARD AVE WALL PROFILE
SCALE: HOR. 1" = 10' VERT. 1" = 10'



SECTION 1 PROFILE (STA. 1+15)
SCALE: HOR. 1" = 10' VERT. 1" = 10'



SECTION 2 PROFILE (STA. 1+50)
SCALE: HOR. 1" = 10' VERT. 1" = 10'



NOTES:
 1. SOLVENT WELD, SLIP CONNECTIONS CAN BE SUBSTITUTED FOR THE HUB CONNECTION AT THE CONTRACTOR'S OPTION.
 2. ALL AREA DRAINS / CLEANOUTS AT ANGLE POINTS OR END OF LINES

1 STANDARD CLEANOUT
SCALE: 1" = 1'

NOTES

- CONTRACTOR SHALL MAINTAIN CLEARANCES FOR FIRE APPARATUS AT ALL TIMES. SHOULD ANY WORK LIMIT FIRE ACCESS, CONTRACTOR SHALL PROVIDE TWO BUSINESS DAYS NOTICE TO BERKELEY FIRE DEPARTMENT (BFD). CONTRACTOR SHALL PROVIDE ALTERNATE ACCESS PLANS TO BFD FOR APPROVAL PRIOR TO LIMITING ACCESS.
- CONTRACTOR SHALL PROTECT IN PLACE ALL FIRE HYDRANTS AND MAINTAIN FIRE ACCESS AT ALL TIMES. HYDRANT ON EAST SIDE OF LA LOMA AVENUE, SOUTH OF THE RETAINING WALL.
- CONTRACTOR SHALL CRACK SEAL VOIDS ALONG THE REMAINDER OF THE EXISTING RETAINING WALL, AS APPROVED BY THE ENGINEER.
- PROTECT IN PLACE ALL EXISTING UTILITIES, UNO (INCLUDING MAINTENANCE HOLES, POWER POLES, OVERHEAD LINES, ETC).
- DEPTH OF PIER VARIES DEPENDING ON THE DEPTH OF BEDROCK. CONTRACTOR SHALL CONTACT THE ENGINEER TO OBSERVE EXCAVATION AND VERIFY ADEQUATE DEPTH IN WRITING BEFORE POURING CONCRETE.

KEYNOTES

- NEW RETAINING WALL (SEE DETAILS ON SHEET S-3.1), REMOVE AND DISPOSE EX. RETAINING WALL, EXCAVATE AS REQUIRED FOR NEW WALL FOOTING
- 4" PERFORATED SUB-DRAIN PER DETAIL 5, SHEET S-3.1 (SEE PLAN FOR LENGTH, SLOPE TO DRAIN)
- TREES MAY BE REMOVED AS DIRECTED BY COB. ARBORIST TO MAKE A DETERMINATION DURING THE COURSE OF THE WORK BASED ON EXTENT OF ROOT PRUNING REQUIRE.
- PROVIDE CLEANOUT AT ENDS OF SUB-DRAIN PER DETAIL 1, THIS SHEET



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PROJECT MANAGER: _____ DATE _____
 SURVEY CHIEF OF PARTY _____ DATE _____
 WATERSHED REVIEW: _____ DATE _____

DEPICTION OF MONUMENTS: _____ DATE _____
 SUBMITTED: _____ DATE _____
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 CITY ENGINEER _____ DATE _____

DESIGN: _____ DATE _____
 DRAWN: _____ DATE _____
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 AS BUILT: _____ DATE _____

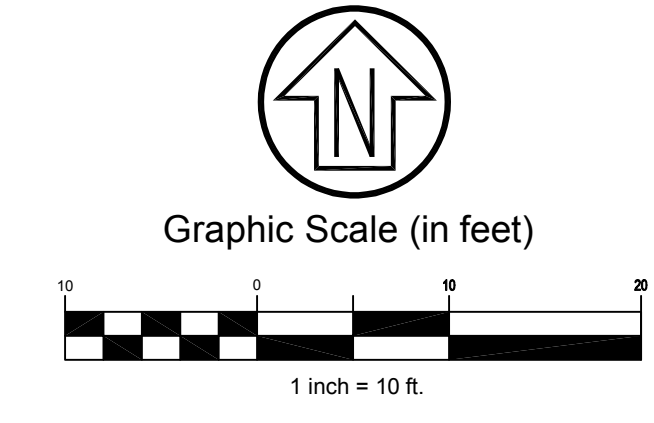
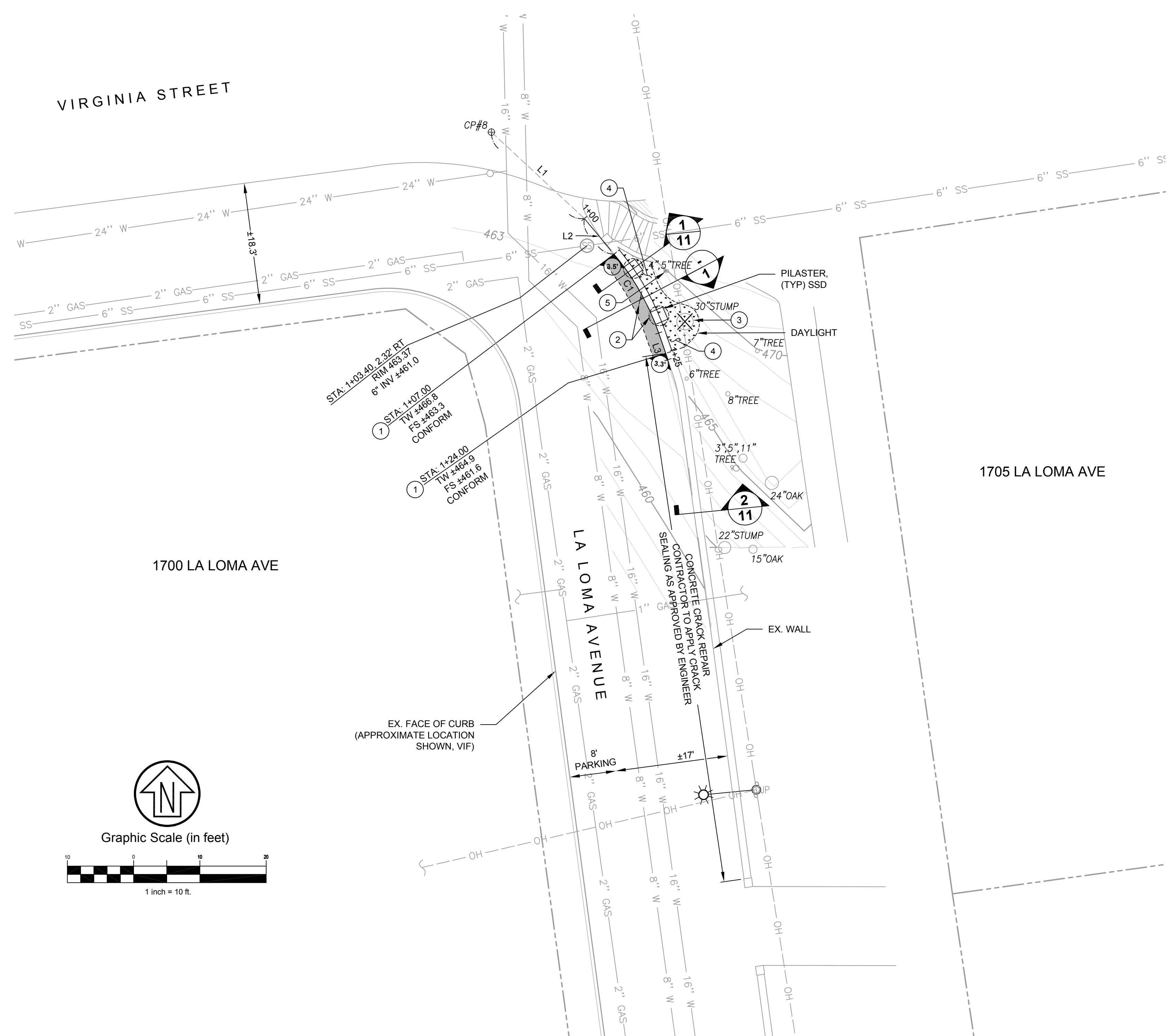
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 VERT. _____
 BOOK _____
 DATE: 03/22/2024

CITY OF BERKELEY
DEPARTMENT OF PUBLIC WORKS

FY 2023 RETAINING WALL AND STORM DRAIN IMPROVEMENT PROJECT
IMPROVEMENT PLAN
HILGARD AVE RETAINING WALL

PLAN 8278
FILE 503-636
C1.0
SHEET 3 OF 21

APPROVAL	DESCRIPTION	DATE	MARK	REVISION



PLAN
SCALE: 1" = 10'

NOTES

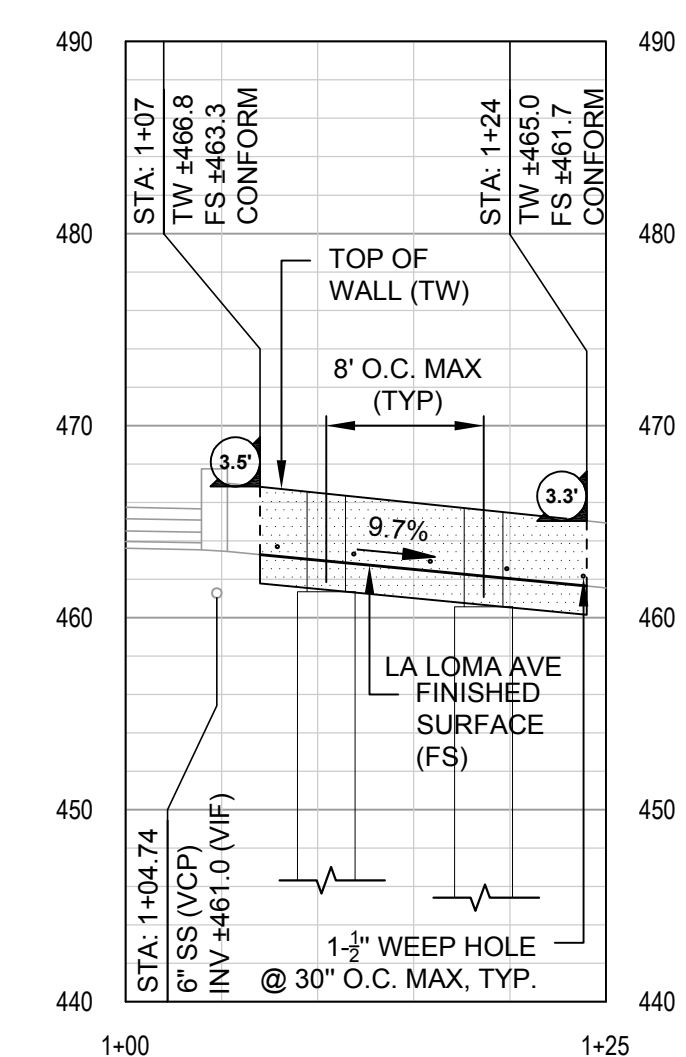
1. CONTRACTOR SHALL MAINTAIN CLEARANCES FOR FIRE APPARATUS AT ALL TIMES. SHOULD ANY WORK LIMIT FIRE ACCESS, CONTRACTOR SHALL PROVIDE TWO BUSINESS DAYS NOTICE TO BERKELEY FIRE DEPARTMENT (BFD). CONTRACTOR SHALL PROVIDE ALTERNATE ACCESS PLANS TO BFD FOR APPROVAL PRIOR TO LIMITING ACCESS.
2. CONTRACTOR SHALL PROTECT IN PLACE ALL FIRE HYDRANTS AND MAINTAIN FIRE ACCESS AT ALL TIMES. HYDRANT AT NORTH SIDE OF VIRGINIA AVENUE BY THE NORTHWEST CORNER.
3. CONTRACTOR SHALL CRACK SEAL VOIDS ALONG THE REMAINDER OF THE EXISTING RETAINING WALL, AS APPROVED BY THE ENGINEER.
4. PROTECT IN PLACE ALL EXISTING UTILITIES, UNO (INCLUDING MAINTENANCE HOLES, POWER POLES, OVERHEAD LINES, ETC).
5. DEPTH OF PIER VARIES DEPENDING ON THE DEPTH OF BEDROCK. CONTRACTOR SHALL CONTACT THE ENGINEER TO OBSERVE EXCAVATION AND VERIFY ADEQUATE DEPTH IN WRITING BEFORE POURING CONCRETE.

KEYNOTES

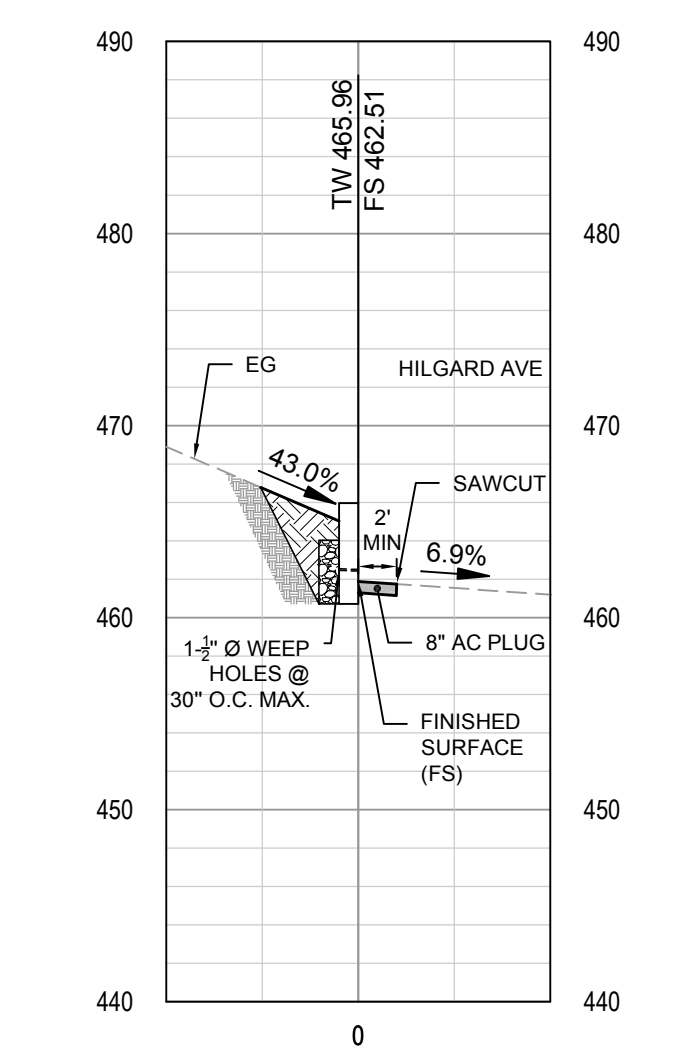
- 1 NEW RETAINING WALL (SEE DETAILS ON SHEET S-3.1), REMOVE AND DISPOSE EX. RETAINING WALL, EXCAVATE AS REQUIRED FOR NEW WALL FOOTING
- 2 REMOVE AND REPLACE ROADSIDE SIGN AND POST, SALVAGE EXISTING SIGN AND MOUNT ON NEW POST AND FOUNDATION PER DETAIL 7, SHEET C2.0
- 3 GRIND AND DISPOSE STUMP DOWN TO EXISTING GRADE
- 4 REMOVE AND DISPOSE EX. SHRUB
- 5 REMOVE AND DISPOSE EX. 4-INCH TREE AS DIRECTED BY COB. UNLESS OTHERWISE DIRECTED, PROTECT IN PLACE EX. 5-INCH TREE. ARBORIST TO MAKE A DETERMINATION DURING THE COURSE OF THE WORK FOR EXTENT OF ROOT PRUNING REQUIREMENTS.

LA LOMA AVE RETAINING WALL ALIGNMENT						
TAG	STATION	NORTHING	EASTING	DELTA / BEARING	DISTANCE	RADIUS
L2	1+00.00	2146996.13	6054573.97	S39° 51' 50"E	7.00	
C1	1+07.00	2146990.76	6054578.45	S29° 30' 26"E	13.74	38.00
L3	1+20.74	2146978.87	6054585.18	S19° 09' 02"E	4.26	

LINE TABLE		
TAG	BEARING	DISTANCE
L1	S47° 05' 04"E	19.15'

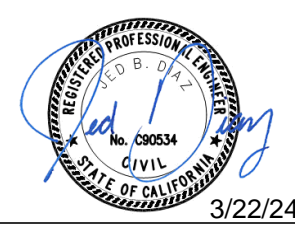


LA LOMA AVE WALL PROFILE
SCALE: HOR. 1" = 10' VERT. 1" = 10'



SECTION 1 PROFILE. (STA: 1+15)
SCALE: HOR. 1" = 10' VERT. 1" = 10'

REVISION	MARK	DATE	DESCRIPTION	APPROVAL



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PROJECT MANAGER: _____ DATE _____
 SURVEY CHIEF OF PARTY _____
 WATERSHED REVIEW: _____ DATE _____

DEPICTION OF MONUMENTS: _____ DATE _____
 SUBMITTED: _____ DATE _____
 SUPERVISING ENGINEER _____
 EXP. _____
 APPROVED: _____ DATE _____
 R.C.E. _____
 CITY ENGINEER _____ EXP. _____

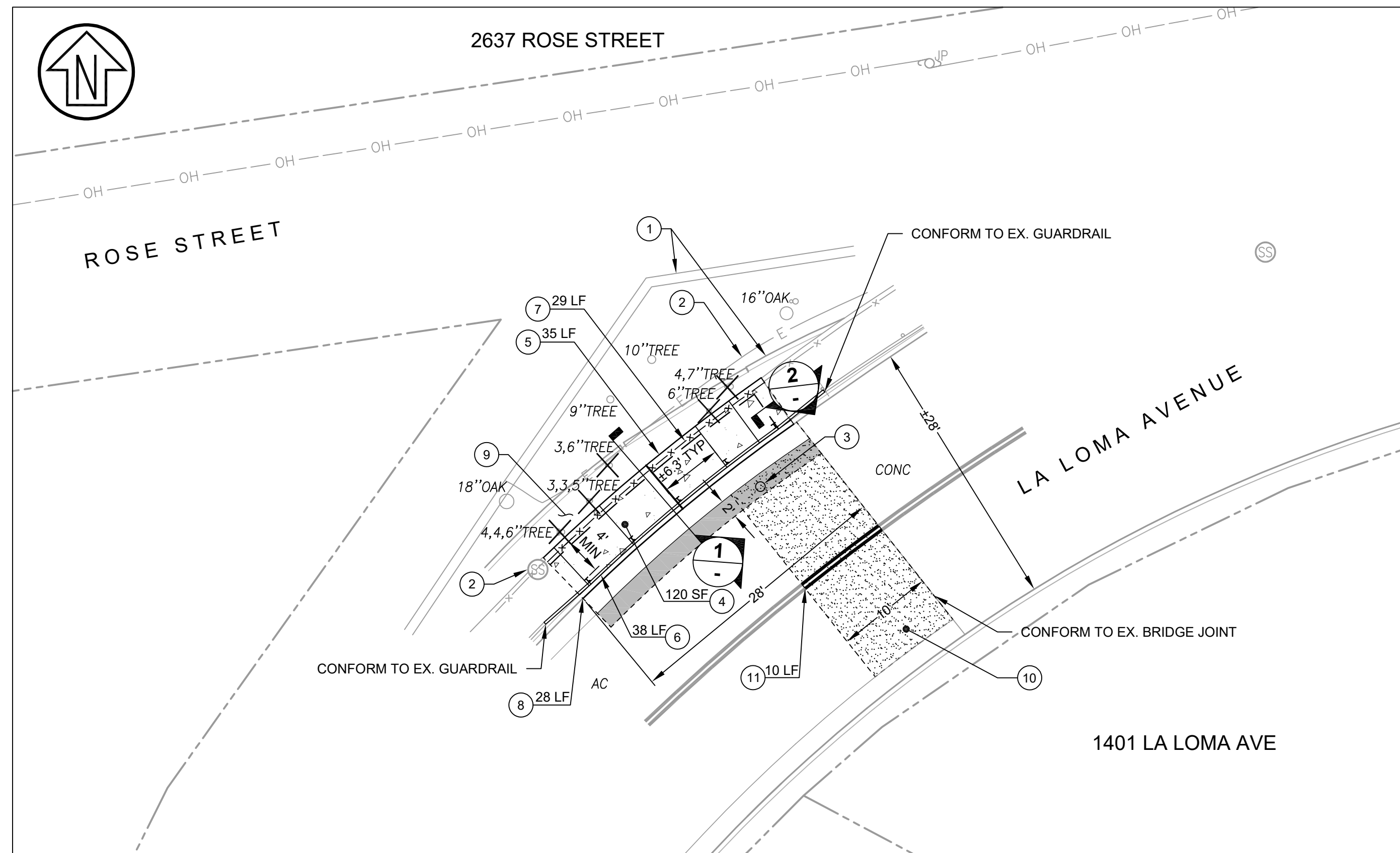
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 AS BUILT: _____ DATE: 03/22/2024

HORIZ. AS NOTED
 VERT. _____
 BOOK _____
 DATE: 03/22/2024

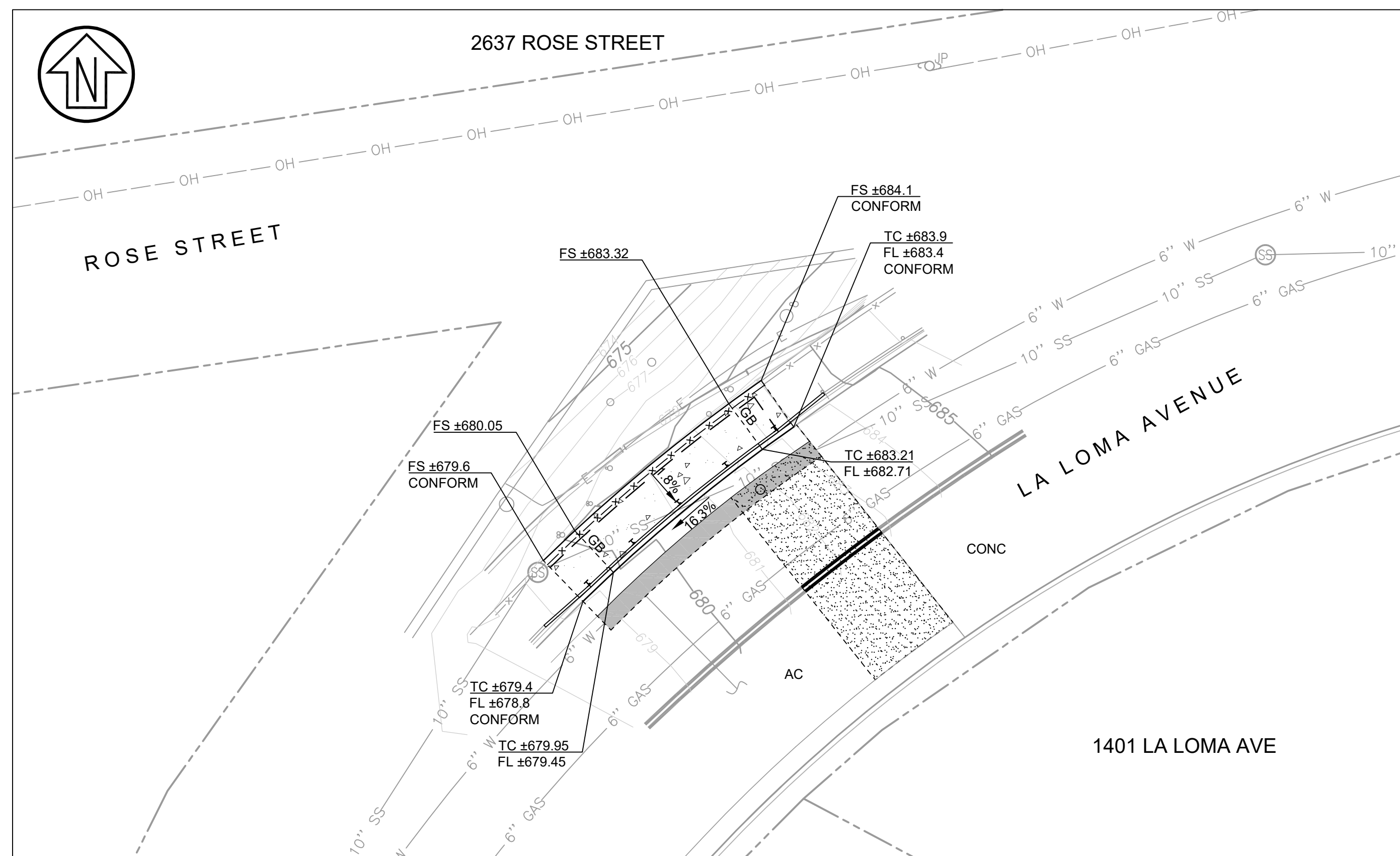
CITY OF BERKELEY
 DEPARTMENT OF PUBLIC WORKS

FY 2023 RETAINING WALL AND STORM DRAIN IMPROVEMENT PROJECT
 IMPROVEMENT PLAN
 LA LOMA AVE RETAINING WALL

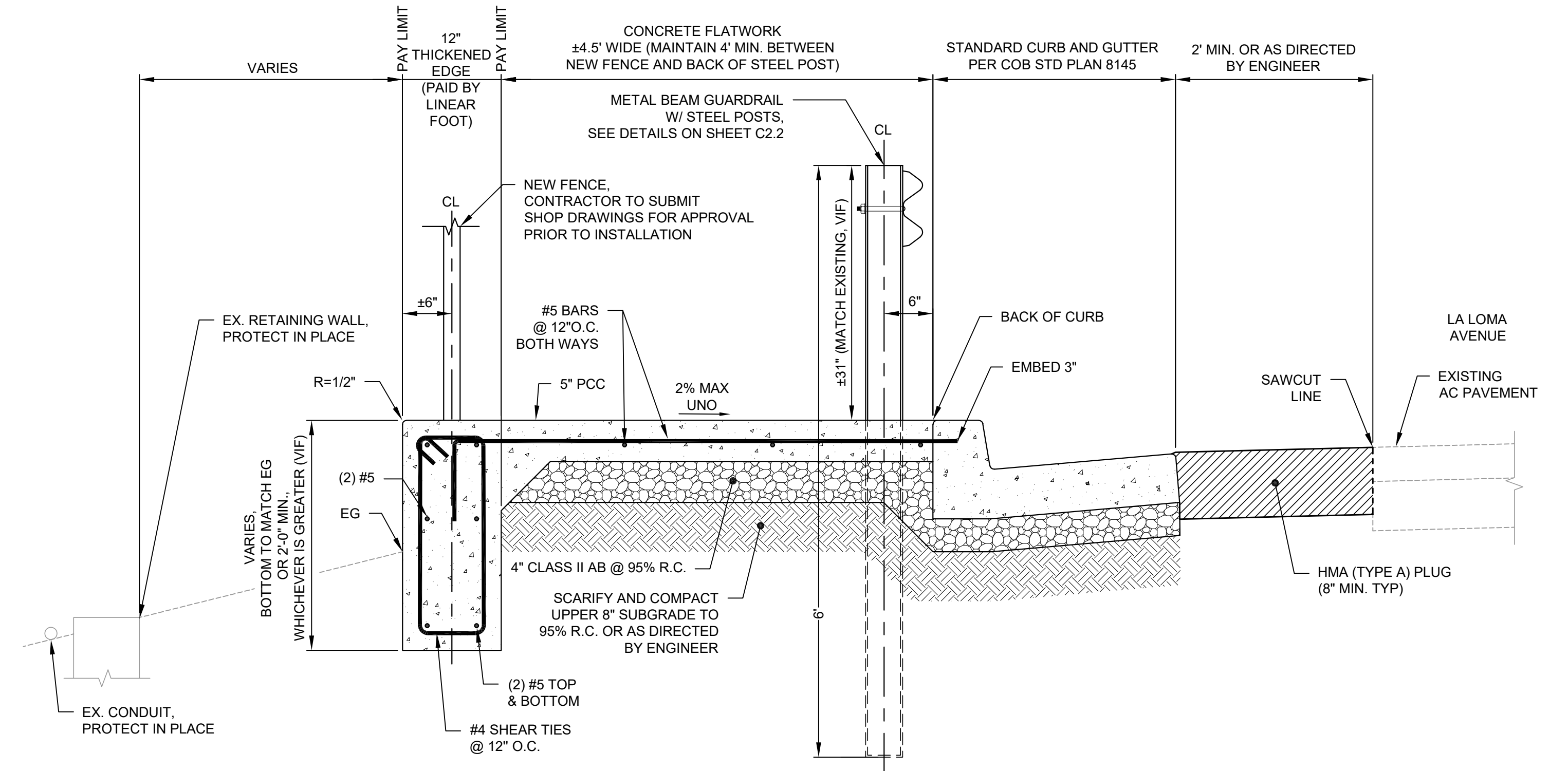
PLAN 8278
 FILE 503-636
 C1.1
 SHEET 4 OF 21



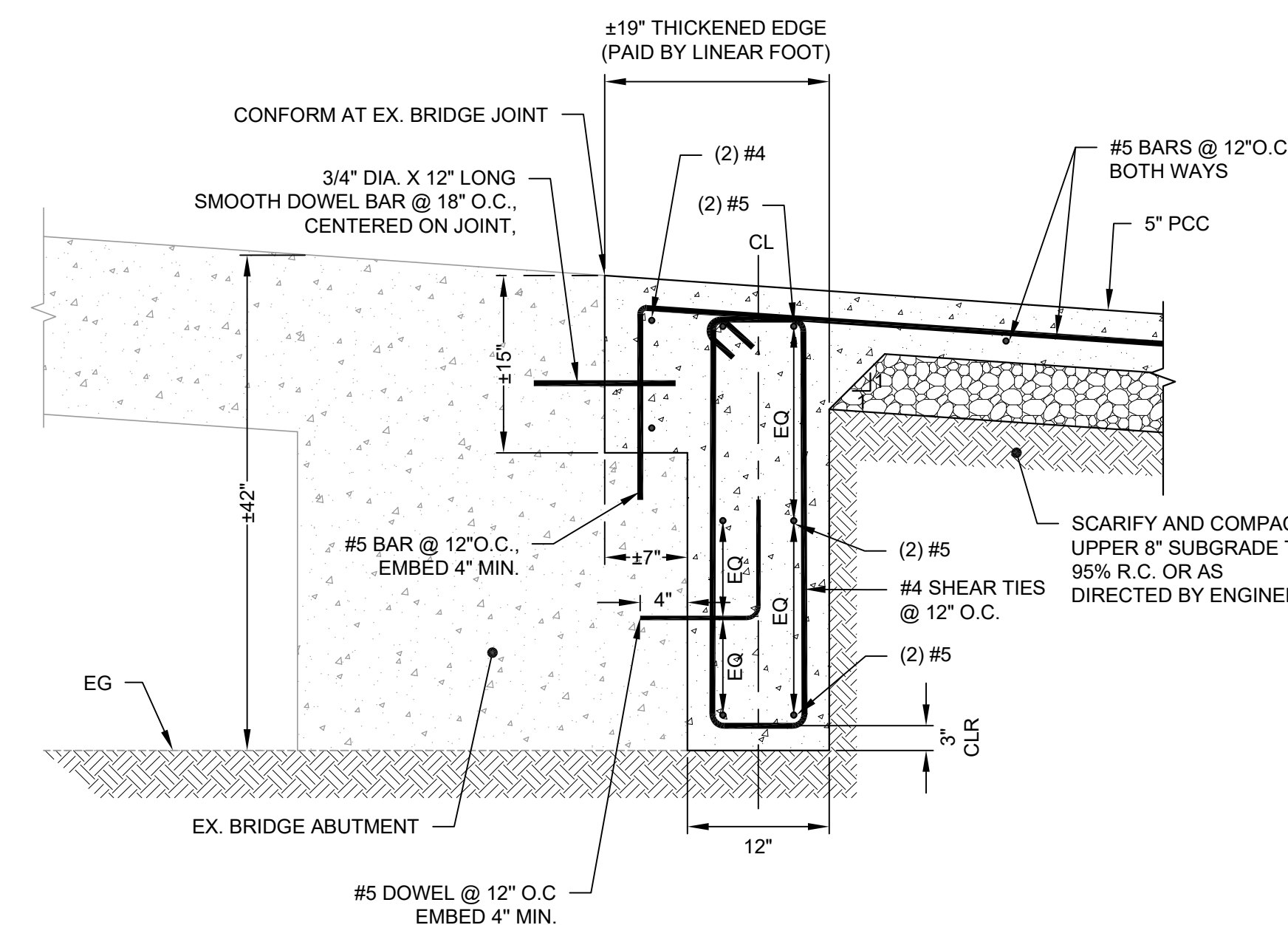
HORIZONTAL CONTROL PLAN
SCALE: 1" = 10'



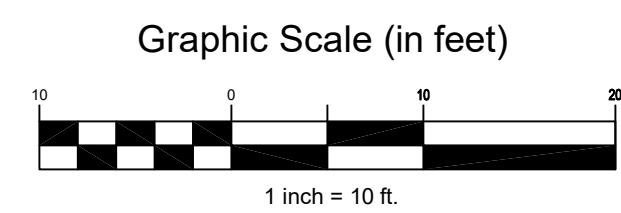
GRADING PLAN
SCALE: 1" = 10'



1 SECTION DETAIL
SCALE: 1" = 1'



2 SECTION DETAIL
SCALE: 1" = 1'



NOTES

1. REMOVE EXISTING GUARDRAIL, FENCE, AND CONCRETE WALK WITHIN SAWCUT LIMITS.
2. CONTRACTOR SHALL MAINTAIN CLEARANCES FOR FIRE APPARATUS AT ALL TIMES. SHOULD ANY WORK LIMIT FIRE ACCESS, CONTRACTOR SHALL PROVIDE TWO BUSINESS DAYS NOTICE TO BERKELEY FIRE DEPARTMENT (BFD). CONTRACTOR SHALL PROVIDE ALTERNATE ACCESS PLANS TO BFD FOR APPROVAL PRIOR TO LIMITING ACCESS.
3. CONTRACTOR SHALL PROTECT IN PLACE ALL FIRE HYDRANTS AND MAINTAIN FIRE ACCESS AT ALL TIMES. HYDRANT AT EAST END OF ROSE STREET, AT BOTTOM OF ROSE STEPS.
4. PROTECT IN PLACE ALL EXISTING TREES UNLESS NOTED OTHERWISE.
5. CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH EBMUD LA LOMA CLUSTER PROJECT. CONTACT TARA SWEET AT TARA.SWEET@EBMUD.COM 5 BUSINESS DAYS IN ADVANCE OF DEMOLITION.

KEYNOTES

1. PROTECT IN PLACE EX. RETAINING WALL
2. PROTECT IN PLACE EX. UTILITY
3. ADJUST WATER VALVE POT TO FINISHED SURFACE PER EBMUD STD 321-EA, SEE SHEET C2.1
4. CONCRETE FLATWORK PER DETAIL 1, THIS SHEET, (±120 SF, COLOR TO MATCH EX. CONCRETE)
5. PROVIDE CONCRETE THICKENED EDGE PER DETAIL 1 AND 2, THIS SHEET, AS APPLIES (SEE PLANS FOR LENGTH)
6. METAL BEAM GUARDRAIL PER DETAILS ON SHEET C2.2
7. PEDESTRIAN METAL FENCE. REPLACE IN KIND (CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO INSTALLATION)
8. STANDARD CURB & GUTTER PER COB PLAN 8145 & 8148
9. REMOVE AND DISPOSE EX. TREES WHERE INDICATED, GRIND AND DISPOSE STUMPS TO EXISTING GRADE
10. REMOVE AND DISPOSE EX. PAVEMENT SECTION (INCLUDING BASE ROCK), PLACE NEW BASE ROCK AND AC TO CONFORM (5" HMA (TYPE A) / 7" MIN. CLASS II AB)
11. MODIFIED NO PASSING ZONES-TWO DIRECTION PER DETAIL 22, STANDARD PLAN A20A (4" YELLOW)



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PROJECT MANAGER: _____ DATE _____
 SURVEY CHIEF OF PARTY _____
 WATERSHED REVIEW: _____ DATE _____

DEPICTION OF MONUMENTS: _____ DATE _____
 SUBMITTED: _____ DATE _____
 SUPERVISING ENGINEER _____
 APPROVED: _____ DATE _____
 CITY ENGINEER _____

DESIGN: _____ JD _____
 DRAWN: _____ DC _____
 CHECK: _____ JD _____
 AS BUILT: _____

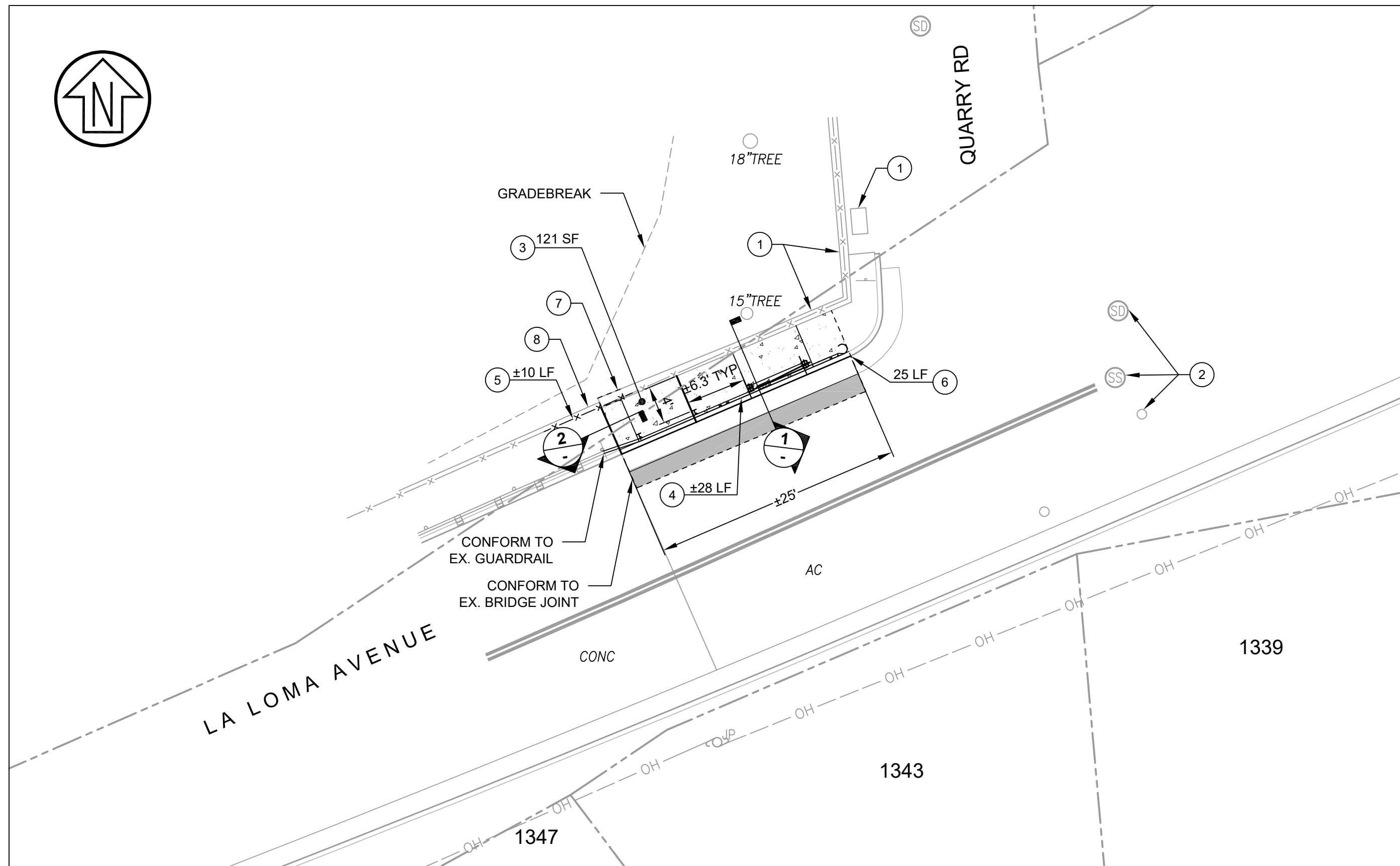
HORIZ. AS NOTED _____
 VERT. _____
 BOOK _____
 DATE: 03/22/2024

CITY OF BERKELEY
 DEPARTMENT OF PUBLIC WORKS

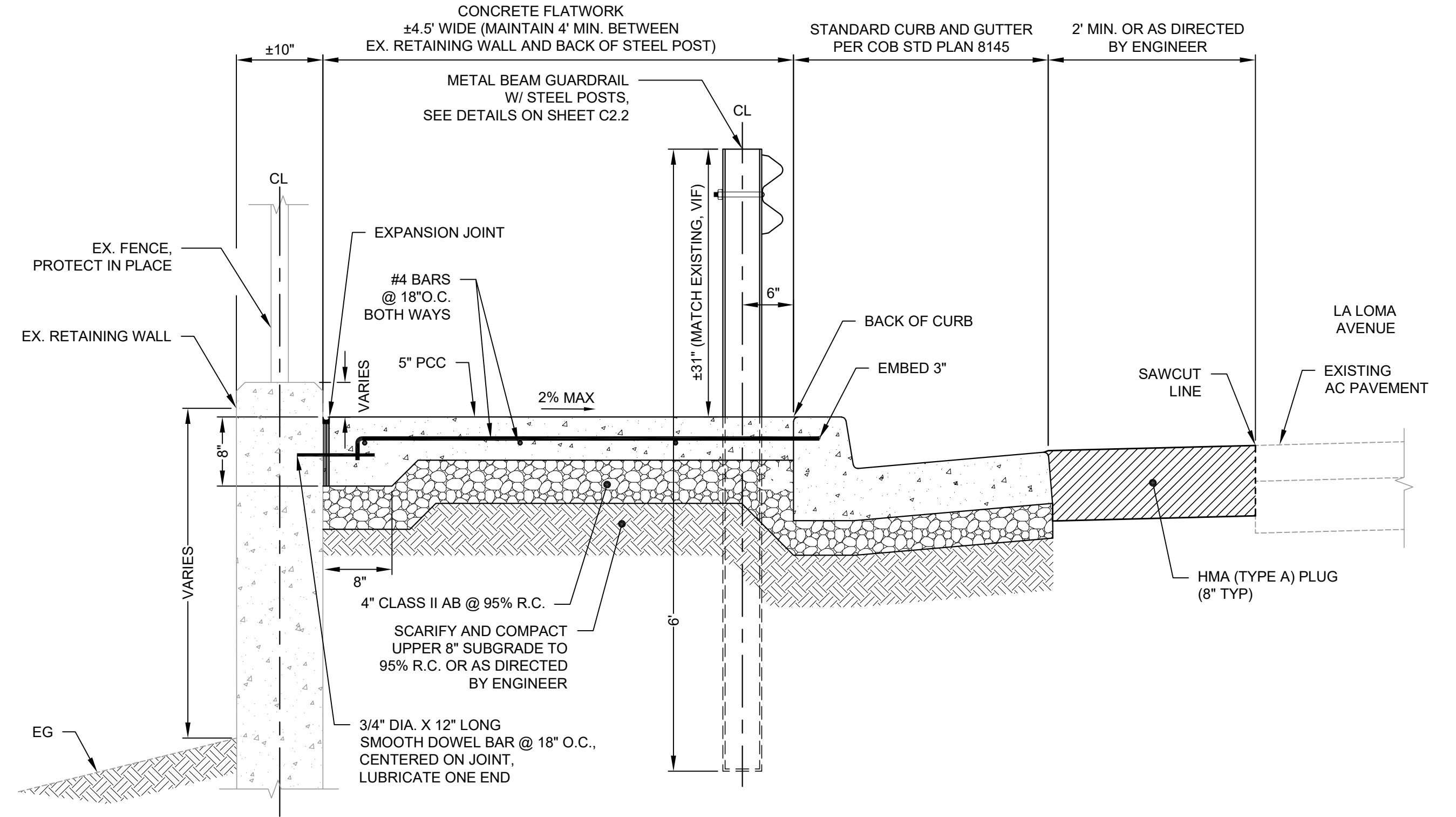
FY 2023 RETAINING WALL AND STORM DRAIN IMPROVEMENT PROJECT
 IMPROVEMENT PLAN
 LA LOMA AVE AT ROSE STEPS

PLAN 8278
 FILE 503-636
 C1.2
 SHEET 5 OF 21

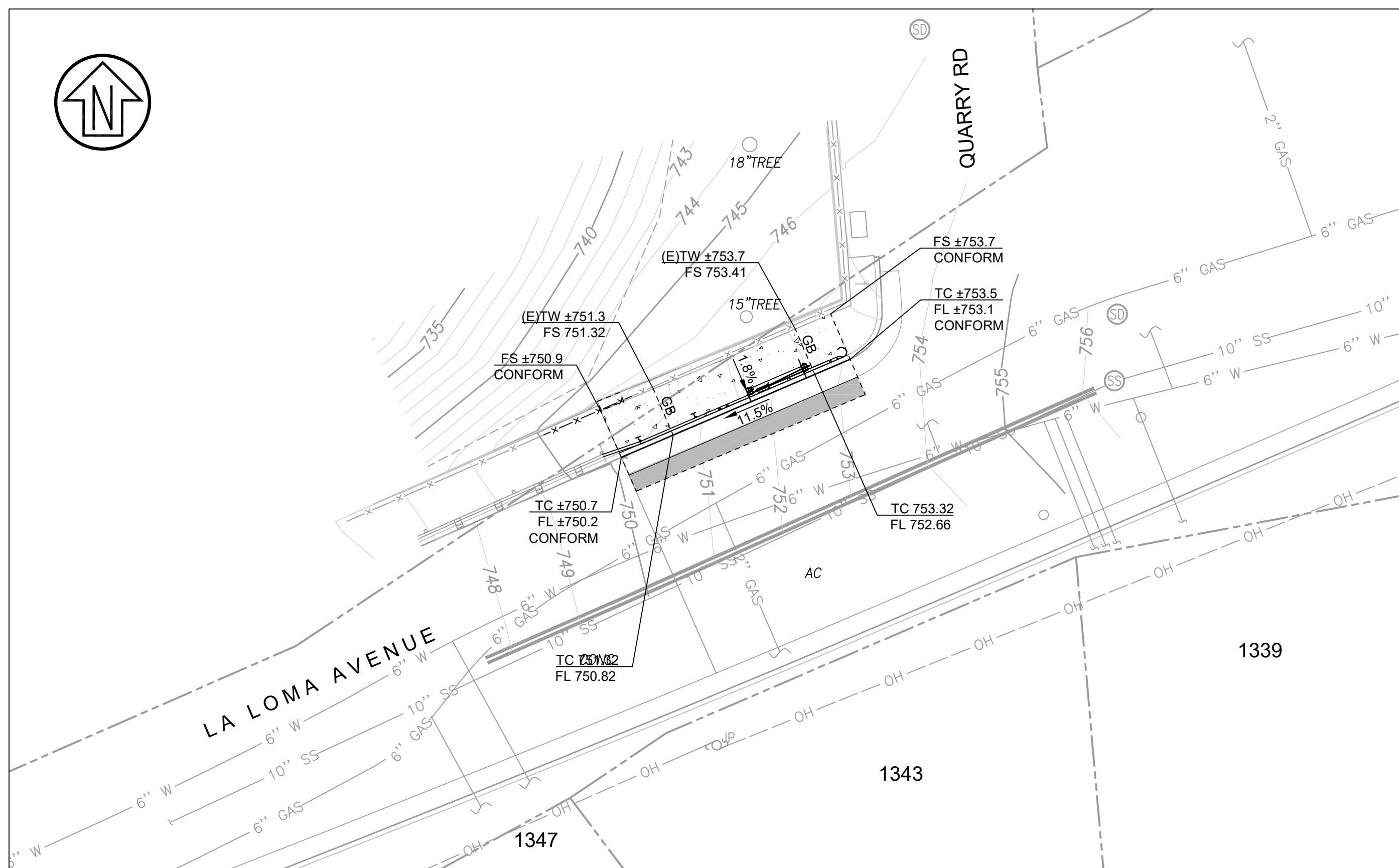
NO.	DESCRIPTION	DATE	MARK	REVISION	APPROVAL



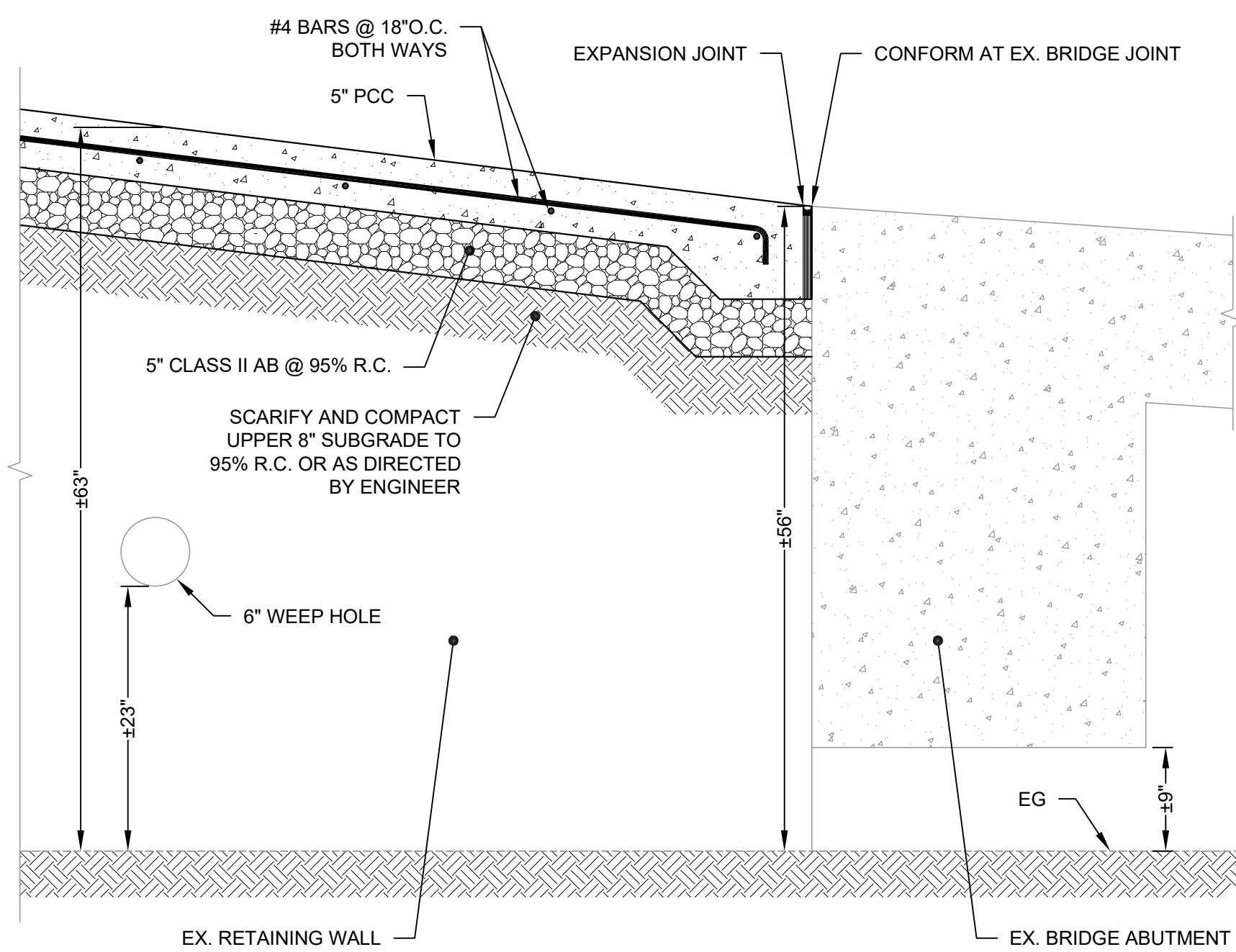
HORIZONTAL CONTROL PLAN
SCALE: 1" = 10'



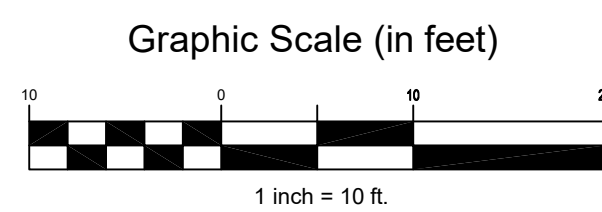
1 SECTION DETAIL
SCALE: 1" = 1'



GRADING PLAN
SCALE: 1" = 10'



2 SECTION DETAIL
SCALE: 1" = 1'



NOTES

- REMOVE EXISTING GUARDRAIL, FENCE, AND CONCRETE WALK WITHIN SAWCUT LIMITS.
- CONTRACTOR SHALL MAINTAIN CLEARANCES FOR FIRE APPARATUS AT ALL TIMES. SHOULD ANY WORK LIMIT FIRE ACCESS, CONTRACTOR SHALL PROVIDE TWO BUSINESS DAYS NOTICE TO BERKELEY FIRE DEPARTMENT (BFD). CONTRACTOR SHALL PROVIDE ALTERNATE ACCESS PLANS TO BFD FOR APPROVAL PRIOR TO LIMITING ACCESS.
- CONTRACTOR SHALL PROTECT IN PLACE ALL FIRE HYDRANTS AND MAINTAIN FIRE ACCESS AT ALL TIMES. HYDRANT AT NORTHEAST QUADRANT OF THE INTERSECTION.
- PROTECT IN PLACE ALL EXISTING TREES UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH EBMUD LA LOMA CLUSTER PROJECT. CONTACT TARA SWEET AT TARA.SWEET@EBMUD.COM 5 BUSINESS DAYS IN ADVANCE OF DEMOLITION.

KEYNOTES

- PROTECT IN PLACE EX. RETAINING WALL
- PROTECT IN PLACE EX. UTILITY
- CONCRETE FLATWORK PER DETAIL 1, THIS SHEET, (±120 SF, COLOR TO MATCH EX. CONCRETE)
- METAL BEAM GUARDRAIL W/ END ANCHOR ASSEMBLY (TYPE SFT-M) PER DETAILS ON SHEET C2.2
- PEDESTRIAN METAL FENCE, REPLACE IN KIND (CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO INSTALLATION)
- STANDARD CURB & GUTTER PER COB PLAN 8145 & 8148
- CONCRETE CRACK REPAIR - SAWCUT, REMOVE, AND DISPOSE BROKEN SECTION OF EXISTING RETAINING WALL, REPLACE PER DETAIL 3, SHEET S-2.1
- CONCRETE CRACK REPAIR - TREAT CONCRETE SPALLING AT EXISTING BRIDGE ABUTMENT WITH EPOXY MORTAR, INJECT CRACKS WITH EPOXY BINDER AS APPROVED BY ENGINEER



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PROJECT MANAGER: _____ DATE _____
 SURVEY CHIEF OF PARTY _____ DATE _____
 WATERSHED REVIEW: _____ DATE _____
 FOR REDUCED PLANS - ORIGINAL SCALE IS IN INCHES

DEPICTION OF MONUMENTS: _____ DATE _____
 SUBMITTED: _____ DATE _____
 SUPERVISING ENGINEER _____ EXP. _____
 APPROVED: _____ DATE _____
 CITY ENGINEER _____ EXP. _____

DESIGN: _____ JD _____
 DRAWN: _____ DC _____
 CHECK: _____ JD _____
 AS BUILT: _____
 HORIZ. AS NOTED
 VERT. _____
 BOOK _____
 DATE: 03/22/2024

CITY OF BERKELEY
 DEPARTMENT OF PUBLIC WORKS

FY 2023 RETAINING WALL AND STORM DRAIN IMPROVEMENT PROJECT
 IMPROVEMENT PLAN
 LA LOMA AVE AT QUARRY ROAD

PLAN 8278
 FILE 503-636
 C1.3
 SHEET 6 OF 21

REVISION	MARK	DATE	DESCRIPTION	APPROVAL

KEYNOTES

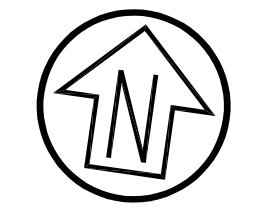
- 1 PROTECT IN PLACE EX. UTILITY (INCLUDING BOXES, PIPES, OVERHEAD WIRE, GUY ANCHORS, ETC AND ANY OTHER APPURTENANCES)
- 2 PLASTIC LANE DELINEATORS (ZICLA ZIPPER BAB OR APPROVED EQUAL), SEE DETAIL 5, SHEET C2.0
- 3 YIELD LINE (SOLID WHITE) PER CALTRANS STD PLAN A24E
- 4 PEDESTRIAN MEDIAN BARRIER PER DETAIL 4, SHEET C2.0
- 5 PEDESTRIAN PASSAGEWAY PER DETAIL 3, SHEET C2.0
- 6 CONCRETE CHANNEL PER DETAIL 3, SHEET C2.0
- 7 STANDARD CURB AND 1 FOOT GUTTER PER COB STD PLAN 8145
- 8 MODIFIED NO PASSING ZONES-TWO DIRECTION PER DETAIL 22, STANDARD PLAN A20A (4" YELLOW)
- 9 12" WIDE LIMIT LINE PER STANDARD PLAN A24E
- 10 6" WHITE LINE
- 11 REMOVE AND DISPOSE EXISTING R1-2 SIGN, REPLACE ROADSIDE SIGN WITH NEW R1-5 SIGN ON EXISTING POST
- 12 ADJUST WATER VALVE POT TO FINISHED SURFACE PER EBMUD STD 321-EA, SEE SHEET C2.1
- 13 ADJUST MONUMENT LID FLUSH WITH CONCRETE PER COB STD PLAN 8090

LEGEND

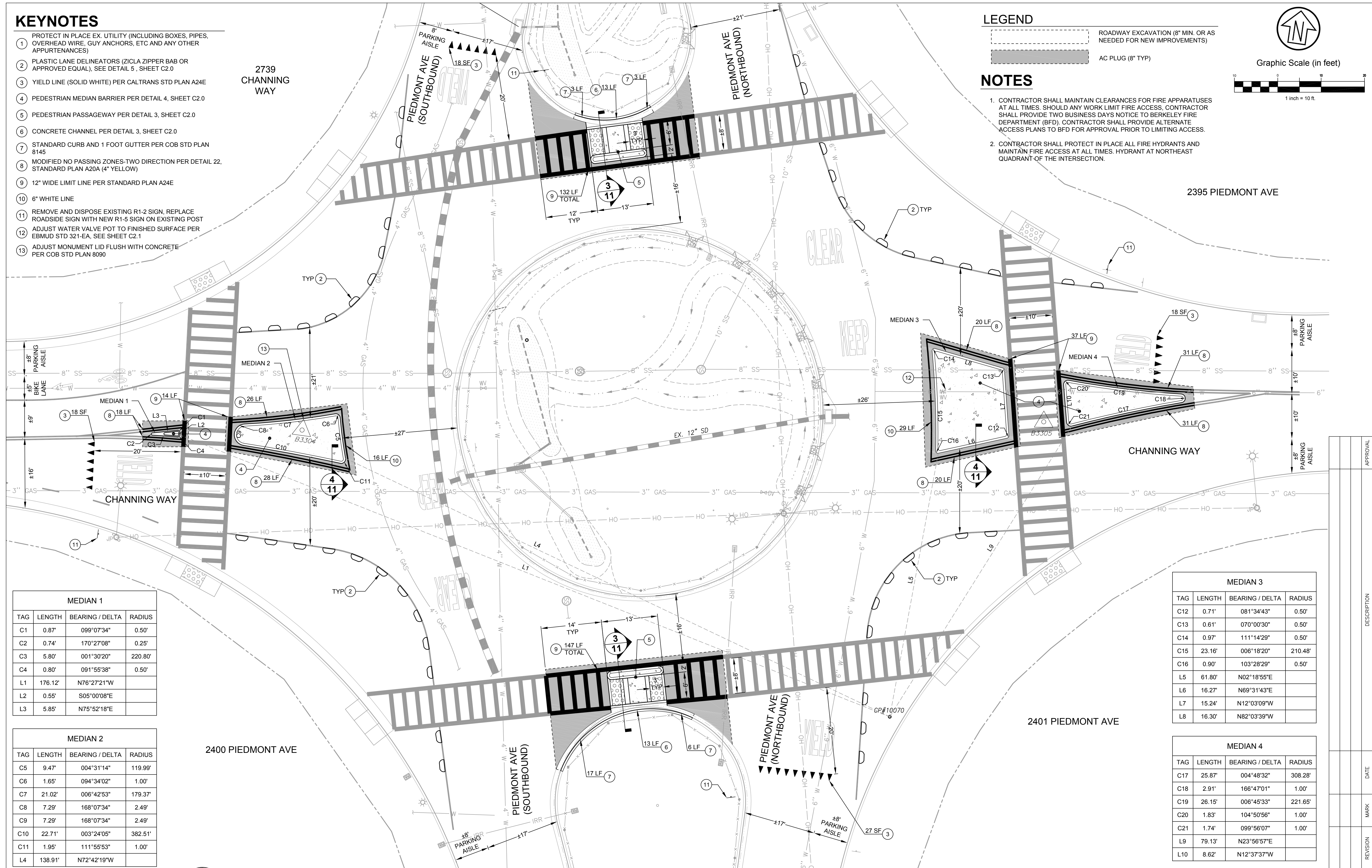
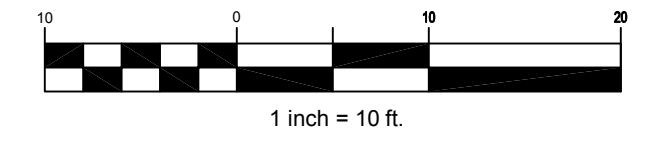
- ROADWAY EXCAVATION (8" MIN. OR AS NEEDED FOR NEW IMPROVEMENTS)
- AC PLUG (8" TYP)

NOTES

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2. CONTRACTOR SHALL PROTECT IN PLACE ALL FIRE HYDRANTS AND MAINTAIN FIRE ACCESS AT ALL TIMES. HYDRANT AT NORTHEAST QUADRANT OF THE INTERSECTION.



Graphic Scale (in feet)



MEDIAN 1			
TAG	LENGTH	BEARING / DELTA	RADIUS
C1	0.87'	099°07'34"	0.50'
C2	0.74'	170°27'08"	0.25'
C3	5.80'	001°30'20"	220.80'
C4	0.80'	091°55'38"	0.50'
L1	176.12'	N76°27'21"W	
L2	0.55'	S05°00'08"E	
L3	5.85'	N75°52'18"E	

MEDIAN 2			
TAG	LENGTH	BEARING / DELTA	RADIUS
C5	9.47'	004°31'14"	119.99'
C6	1.65'	094°34'02"	1.00'
C7	21.02'	006°42'53"	179.37'
C8	7.29'	168°07'34"	2.49'
C9	7.29'	168°07'34"	2.49'
C10	22.71'	003°24'05"	382.51'
C11	1.95'	111°55'53"	1.00'
L4	138.91'	N72°42'19"W	

MEDIAN 3			
TAG	LENGTH	BEARING / DELTA	RADIUS
C12	0.71'	081°34'43"	0.50'
C13	0.61'	070°00'30"	0.50'
C14	0.97'	111°14'29"	0.50'
C15	23.16'	006°18'20"	210.48'
C16	0.90'	103°28'29"	0.50'
L5	61.80'	N02°18'55"E	
L6	16.27'	N69°31'43"E	
L7	15.24'	N12°03'09"W	
L8	16.30'	N82°03'39"W	

MEDIAN 4			
TAG	LENGTH	BEARING / DELTA	RADIUS
C17	25.87'	004°48'32"	308.28'
C18	2.91'	166°47'01"	1.00'
C19	26.15'	006°45'33"	221.65'
C20	1.83'	104°50'56"	1.00'
C21	1.74'	099°56'07"	1.00'
L9	79.13'	N23°56'57"E	
L10	8.62'	N12°37'37"W	



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 SURVEY CHIEF OF PARTY _____ DATE _____
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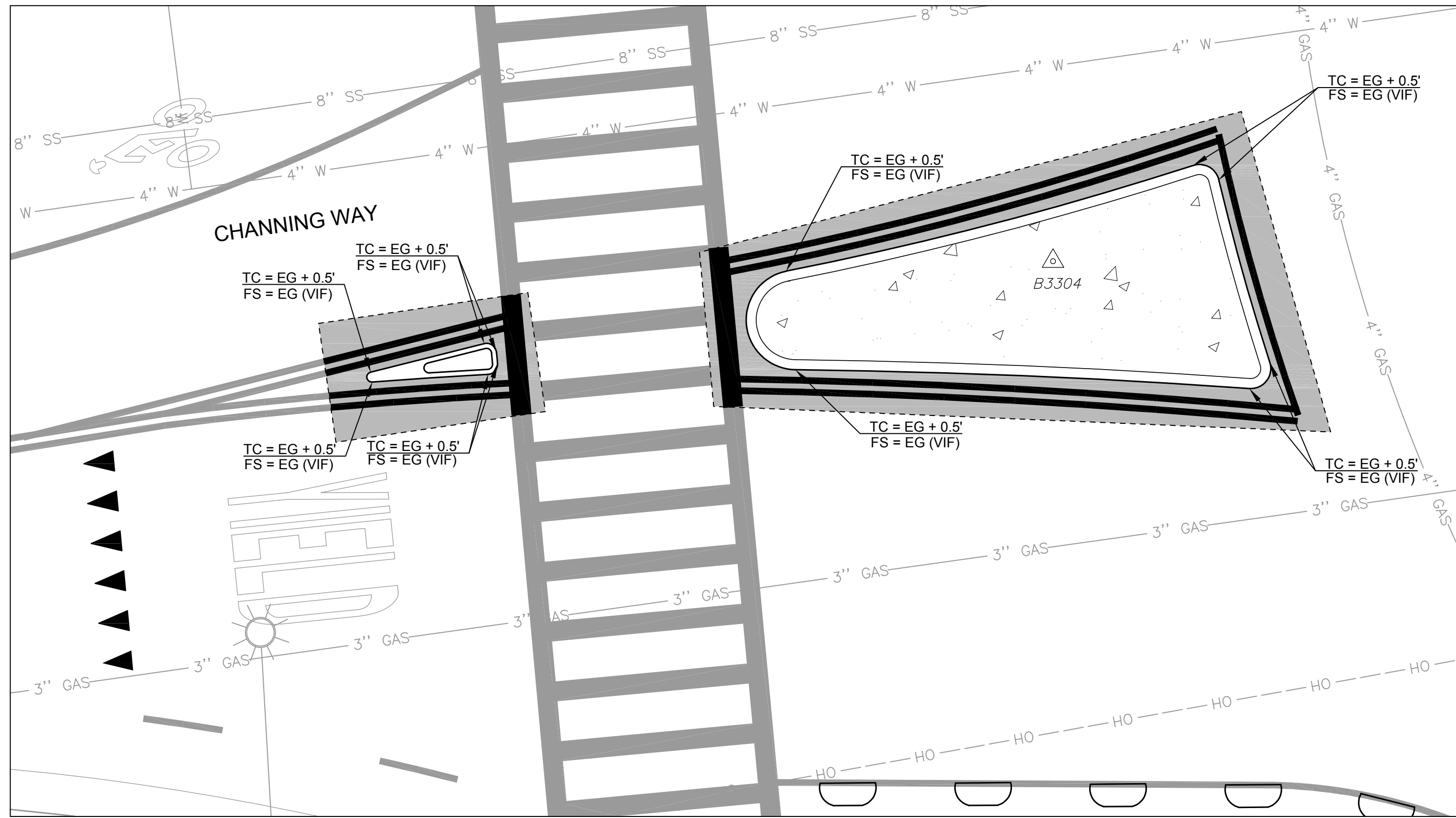
DEPICTION OF MONUMENTS: _____ DATE _____
 SUBMITTED: _____ DATE _____
 SUPERVISING ENGINEER _____
 APPROVED: _____ DATE _____
 CITY ENGINEER _____

DESIGN: _____ JD _____
 DRAWN: _____ DC _____
 CHECK: _____ JD _____
 AS BUILT: _____
 HORIZ.: _____
 VERT.: _____
 BOOK: _____
 DATE: 03/22/2024

CITY OF BERKELEY
 DEPARTMENT OF PUBLIC WORKS

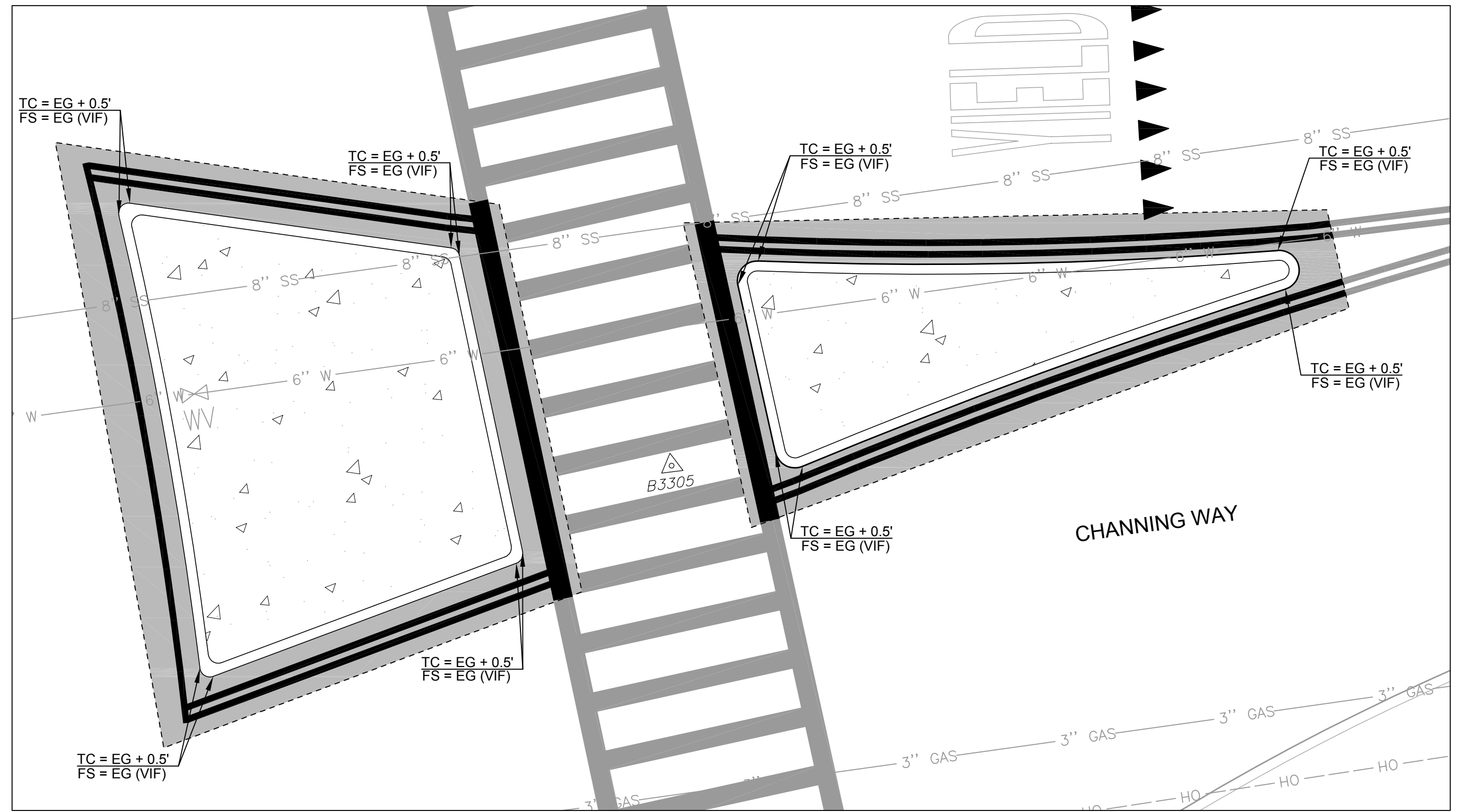
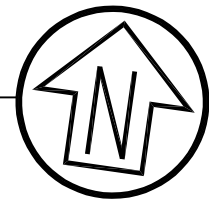
FY 2023 RETAINING WALL AND STORM DRAIN IMPROVEMENT PROJECT
 IMPROVEMENT PLAN
 PIEDMONT CIRCLE TRAFFIC CALMING
 HORIZONTAL CONTROL

APPROVAL	DESCRIPTION	DATE	MARK	REVISION



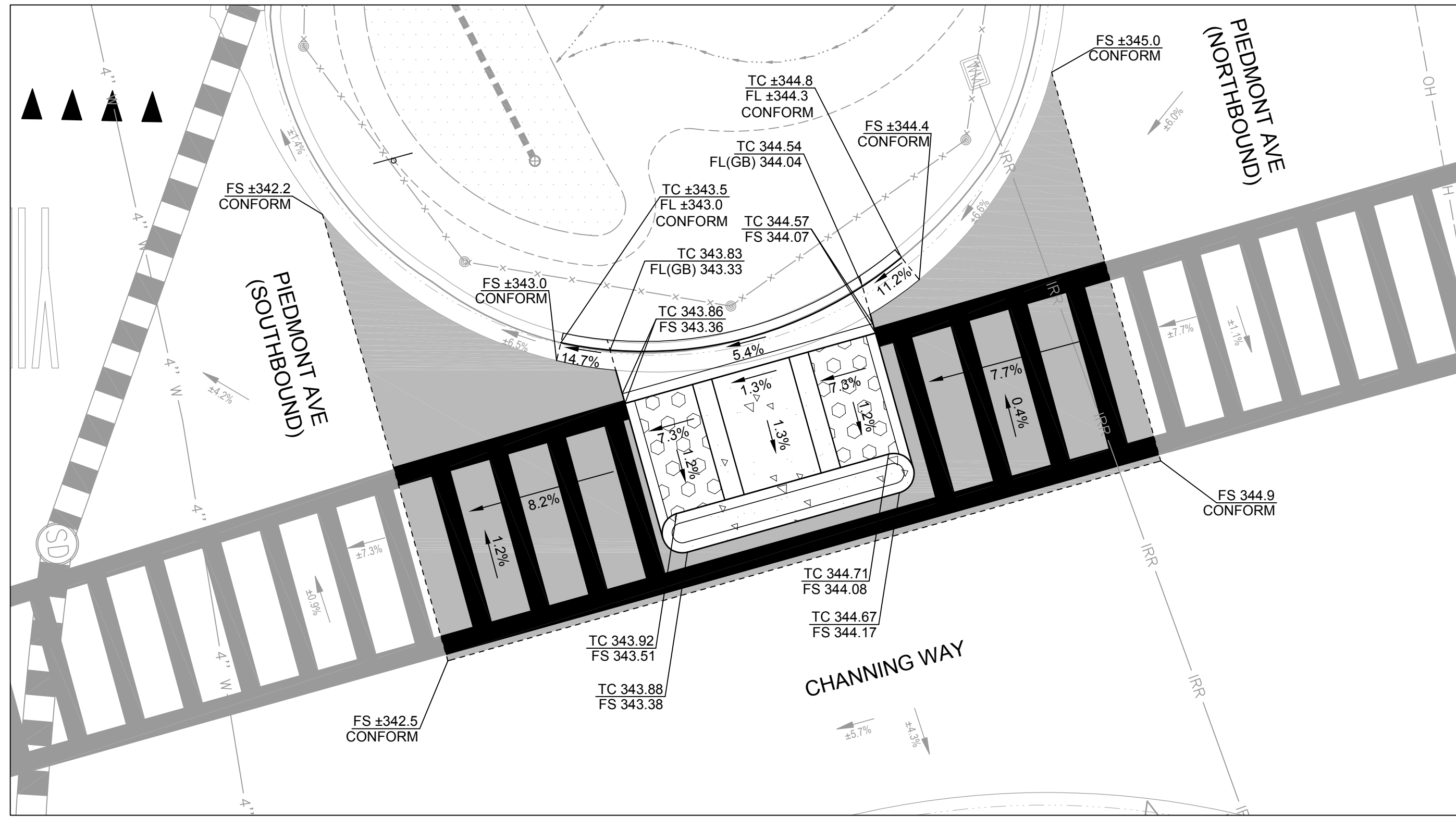
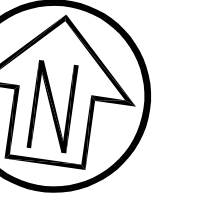
1 GRADING ENLARGEMENT - WEST MEDIANS

SCALE: 1" = 5'



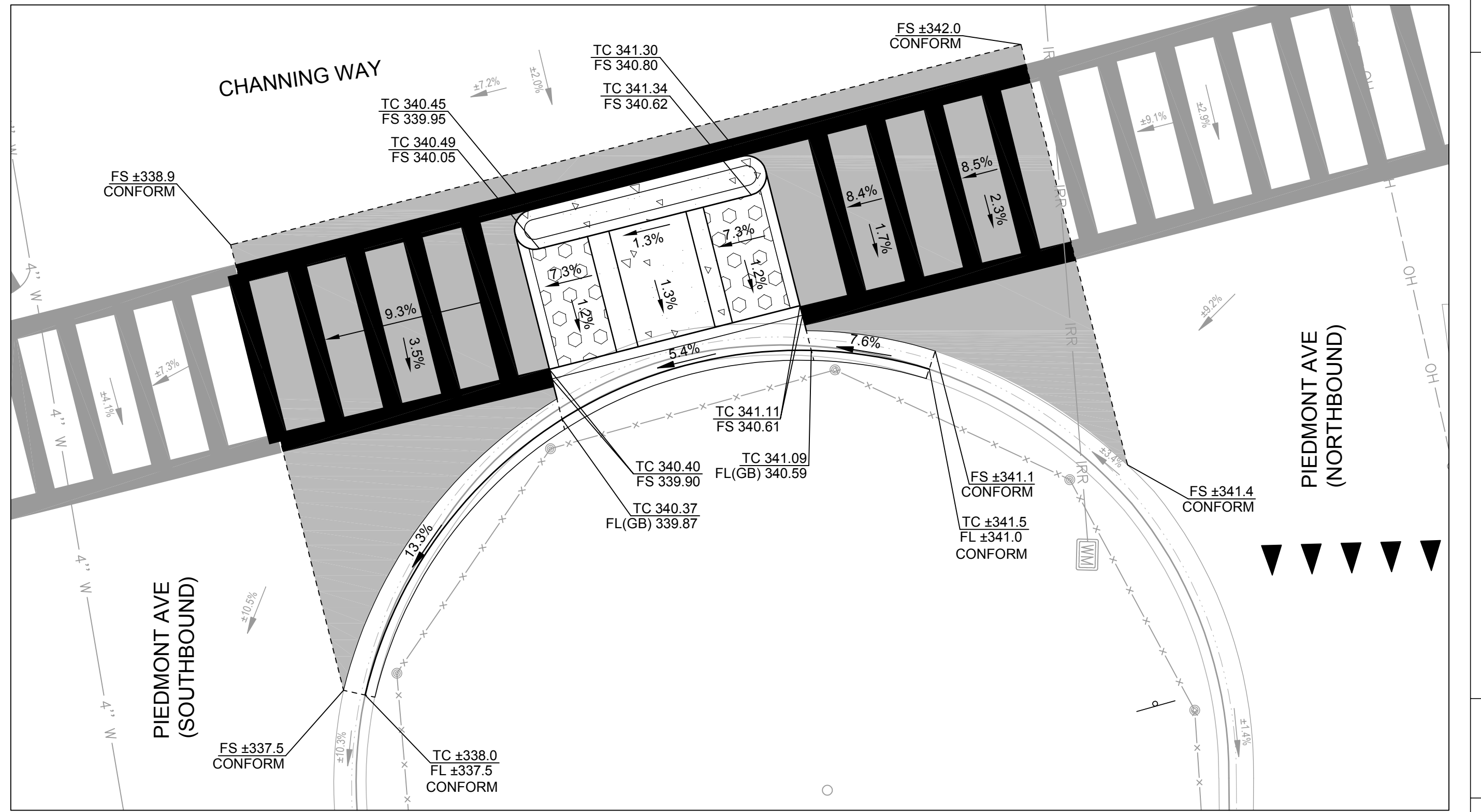
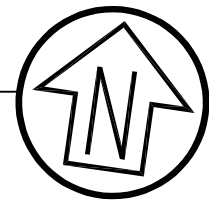
2 GRADING ENLARGEMENT - EAST MEDIANS

SCALE: 1" = 5'



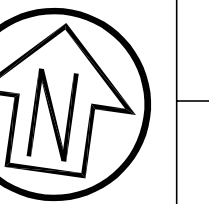
3 GRADING ENLARGEMENT - NORTH MEDIAN

SCALE: 1" = 5'



4 GRADING ENLARGEMENT - SOUTH MEDIAN

SCALE: 1" = 5'



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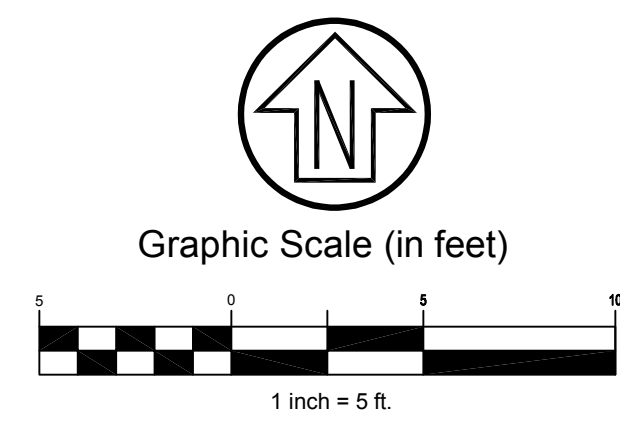
PROJECT MANAGER: _____	DATE: _____	DEPICTION OF MONUMENTS: _____	DATE: _____
SURVEY CHIEF OF PARTY: _____		WATERSHED REVIEW: _____	
DATE: _____		DATE: _____	

SUBMITTED: _____	DATE: _____	DESIGN: _____	HORIZ.: _____
SUPERVISING ENGINEER: _____	REGISTR.: _____	DRAWN: _____	VERT.: _____
APPROVED: _____	EXP.: _____	CHECK: _____	BOOK: _____
CITY ENGINEER: _____	DATE: _____	AS BUILT: _____	DATE: 03/22/2024

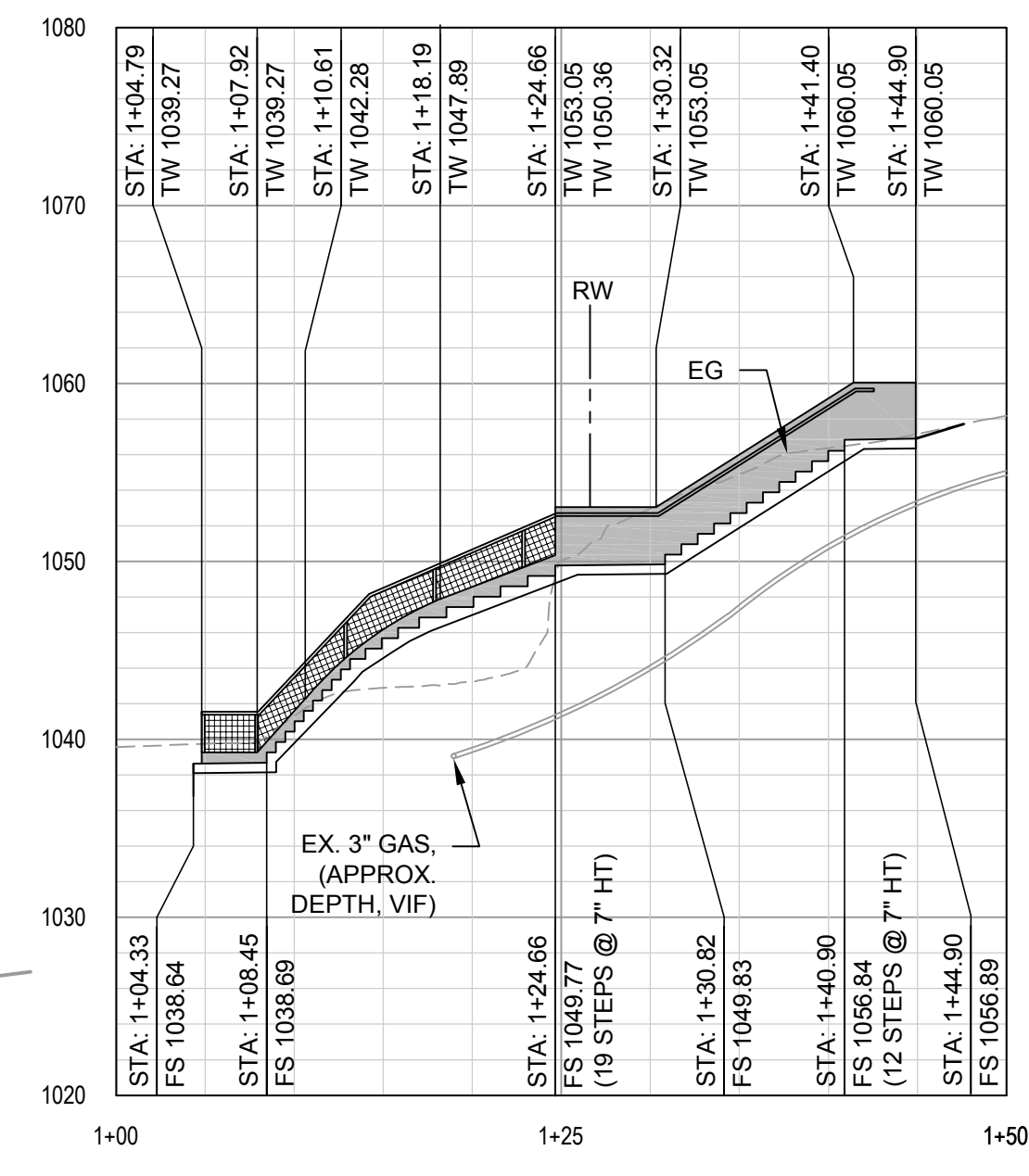
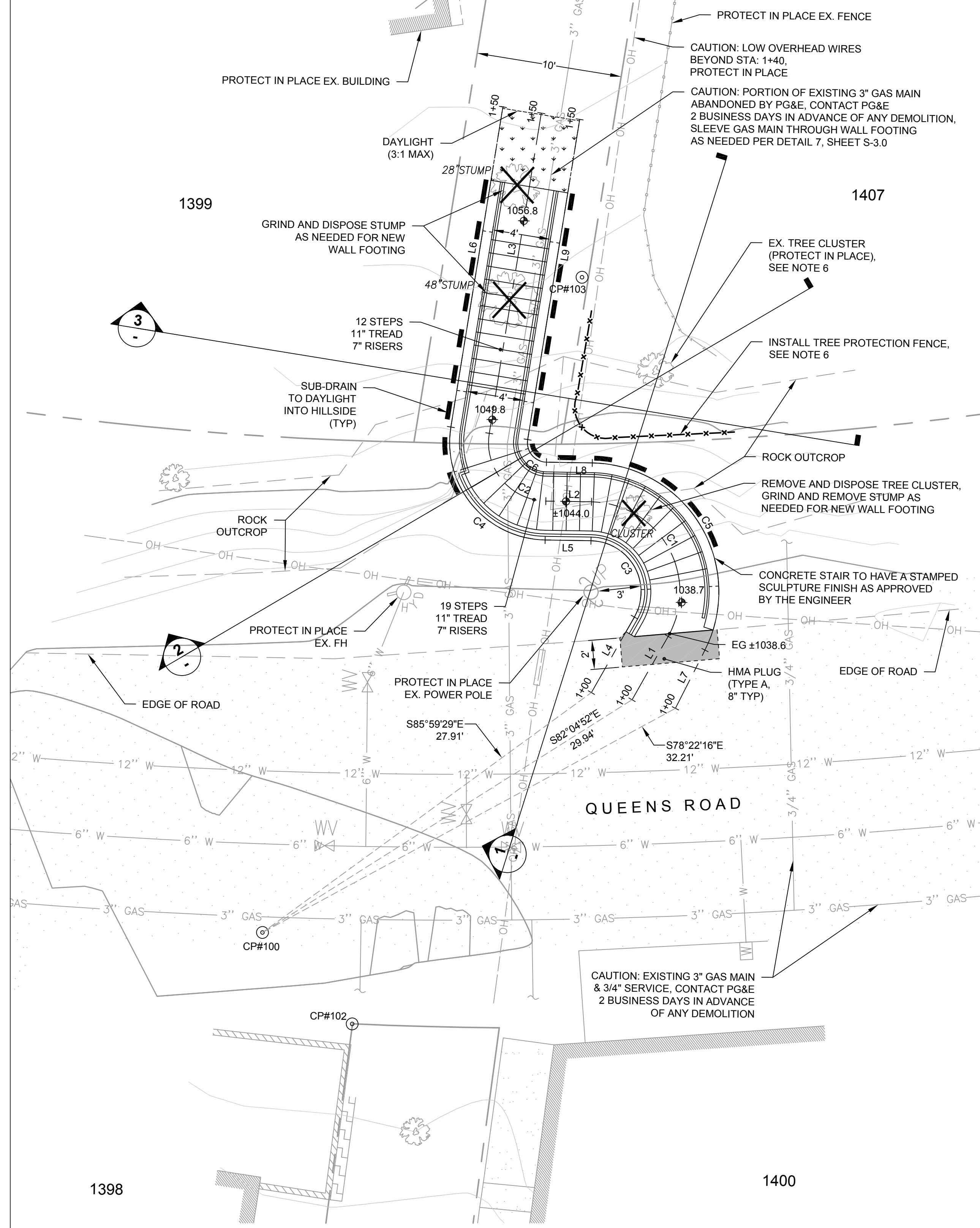
CITY OF BERKELEY
 DEPARTMENT OF PUBLIC WORKS
 FY 2023 RETAINING WALL AND STORM DRAIN IMPROVEMENT PROJECT
 IMPROVEMENT PLAN
 PIEDMONT CIRCLE TRAFFIC CALMING
 GRADING ENLARGEMENTS

REVISION	MARK	DATE	DESCRIPTION	APPROVAL

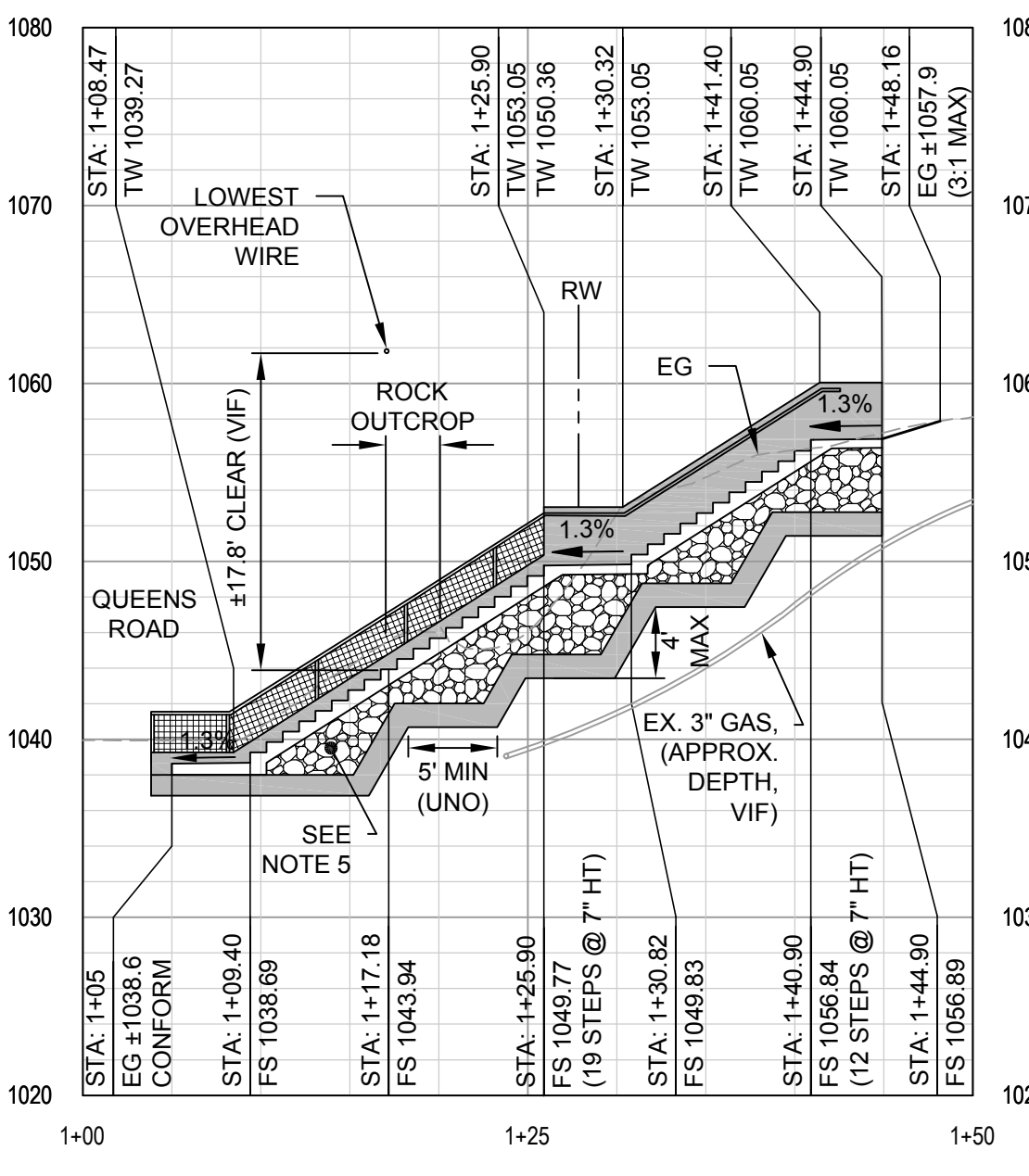
PLAN 8278
 FILE 503-636
 C1.5
 SHEET 8 OF 21



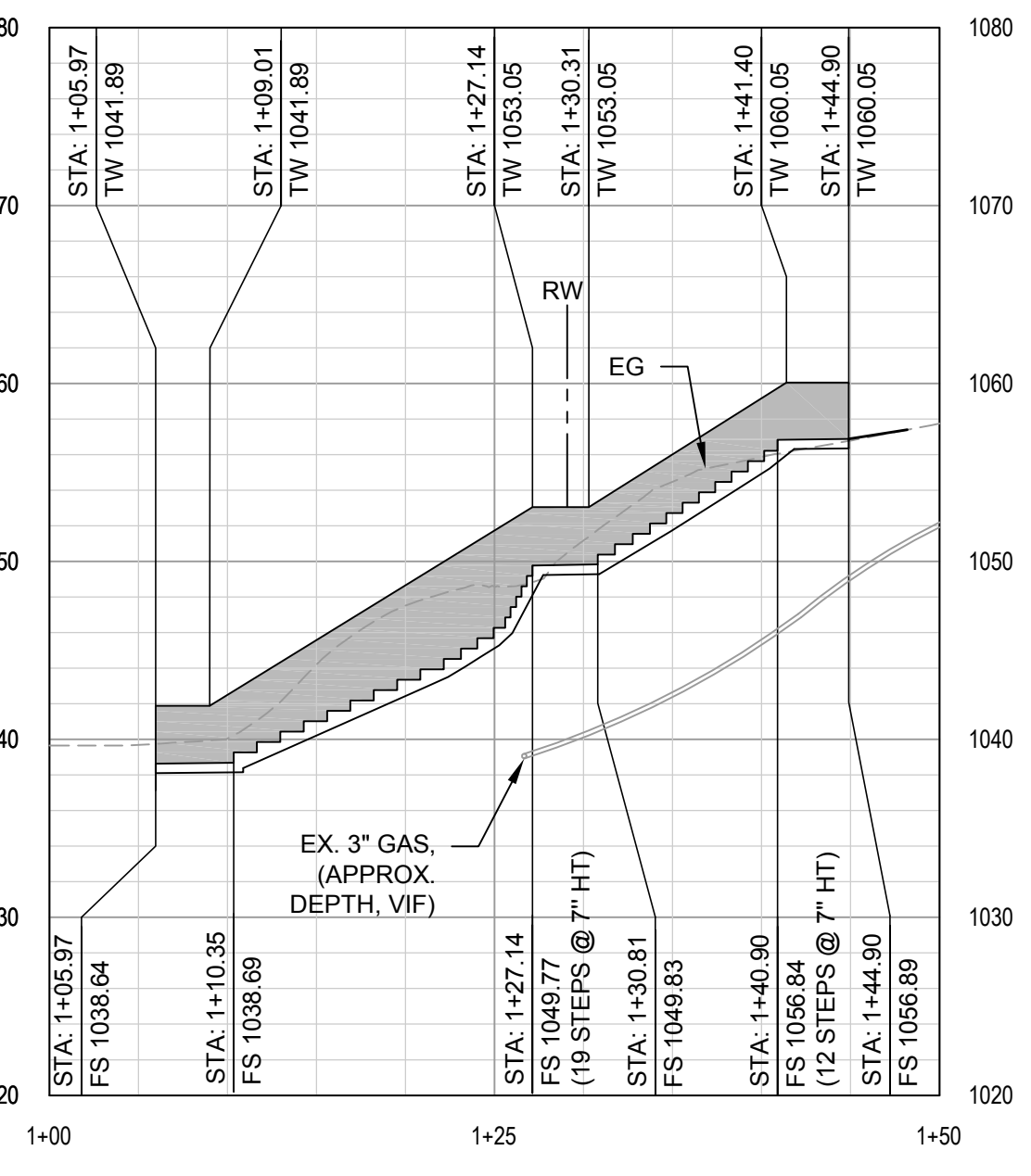
LT WALL ALIGNMENT							CL STAIR ALIGNMENT							RT WALL ALIGNMENT						
TAG	STATION	NORTHING	EASTING	DELTA / BEARING	DISTANCE	RADIUS	TAG	STATION	NORTHING	EASTING	DELTA / BEARING	DISTANCE	RADIUS	TAG	STATION	NORTHING	EASTING	DELTA / BEARING	DISTANCE	RADIUS
L4	1+00.00	2149346.23	6056141.10	N69° 47' 48"E	5.95		L1	1+00.00	2149344.06	6056142.91	N69° 47' 48"E	5.00		L7	1+00.00	2149341.69	6056144.81	N66° 59' 02"E	4.48	
C3	1+05.95	2149348.29	6056146.69	N10° 27' 52"E	7.25	3.50	C1	1+05.00	2149345.78	6056147.61	N10° 27' 52"E	12.77	6.17	C5	1+04.48	2149343.44	6056148.93	N9° 03' 29"E	17.86	8.83
L5	1+13.20	2149354.21	6056147.78	N48° 52' 04"W	3.14		L2	1+17.77	2149356.22	6056149.53	N48° 52' 04"W	3.14		L8	1+22.34	2149358.22	6056151.29	N48° 52' 04"W	3.14	
C4	1+16.34	2149356.27	6056145.42	N0° 14' 35"E	11.43	6.67	C2	1+20.91	2149358.28	6056147.17	N0° 14' 35"E	6.86	4.00	C6	1+25.48	2149360.29	6056148.92	N0° 14' 35"E	2.29	1.33
L6	1+27.77	2149366.35	6056145.46	N49° 21' 14"E	22.23		L3	1+27.77	2149364.33	6056147.20	N49° 21' 14"E	22.23		L9	1+27.76	2149362.30	6056148.93	N49° 21' 14"E	22.23	



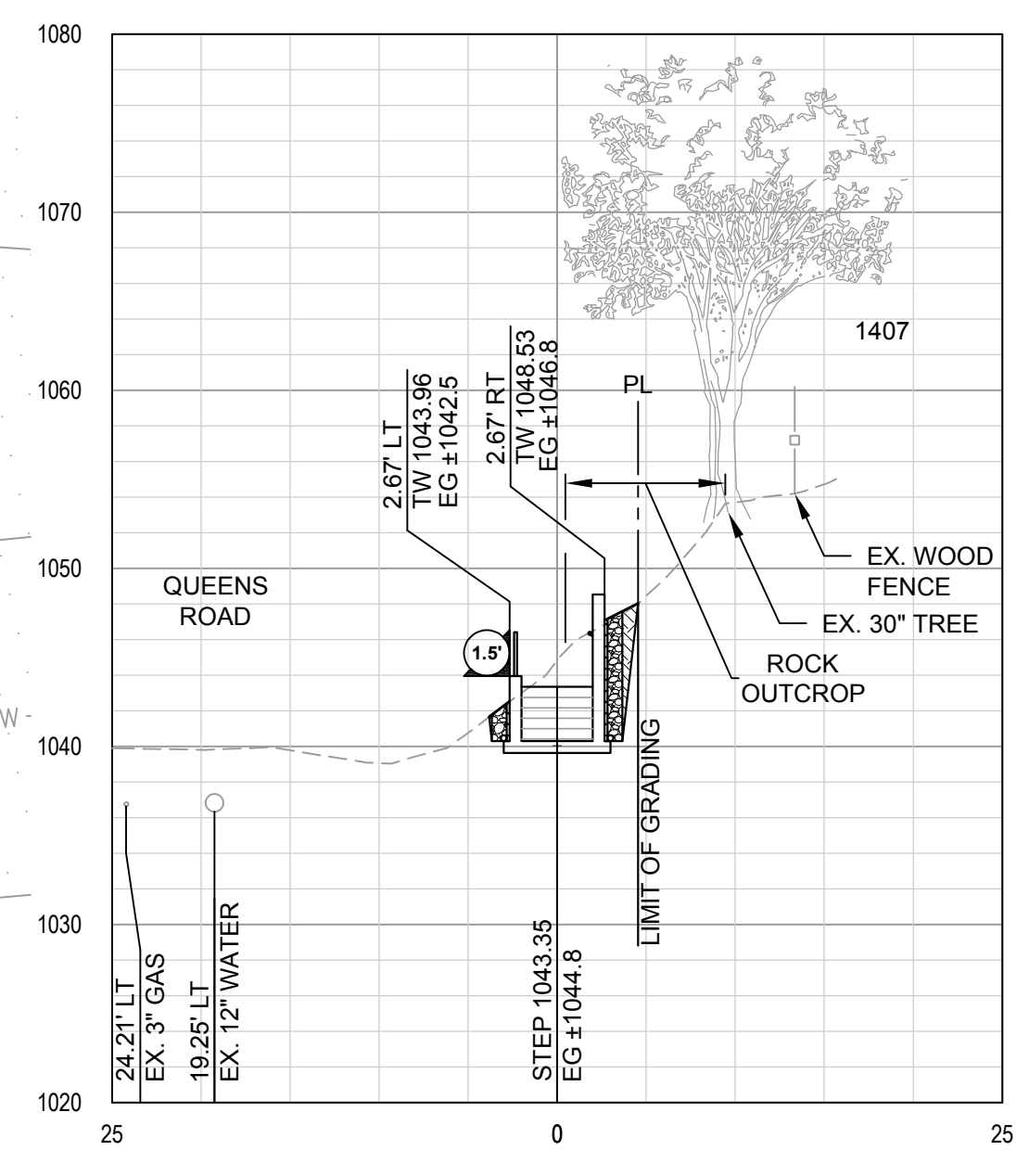
LT WALL PROFILE
SCALE: HOR. 1" = 10' VERT. 1" = 10'



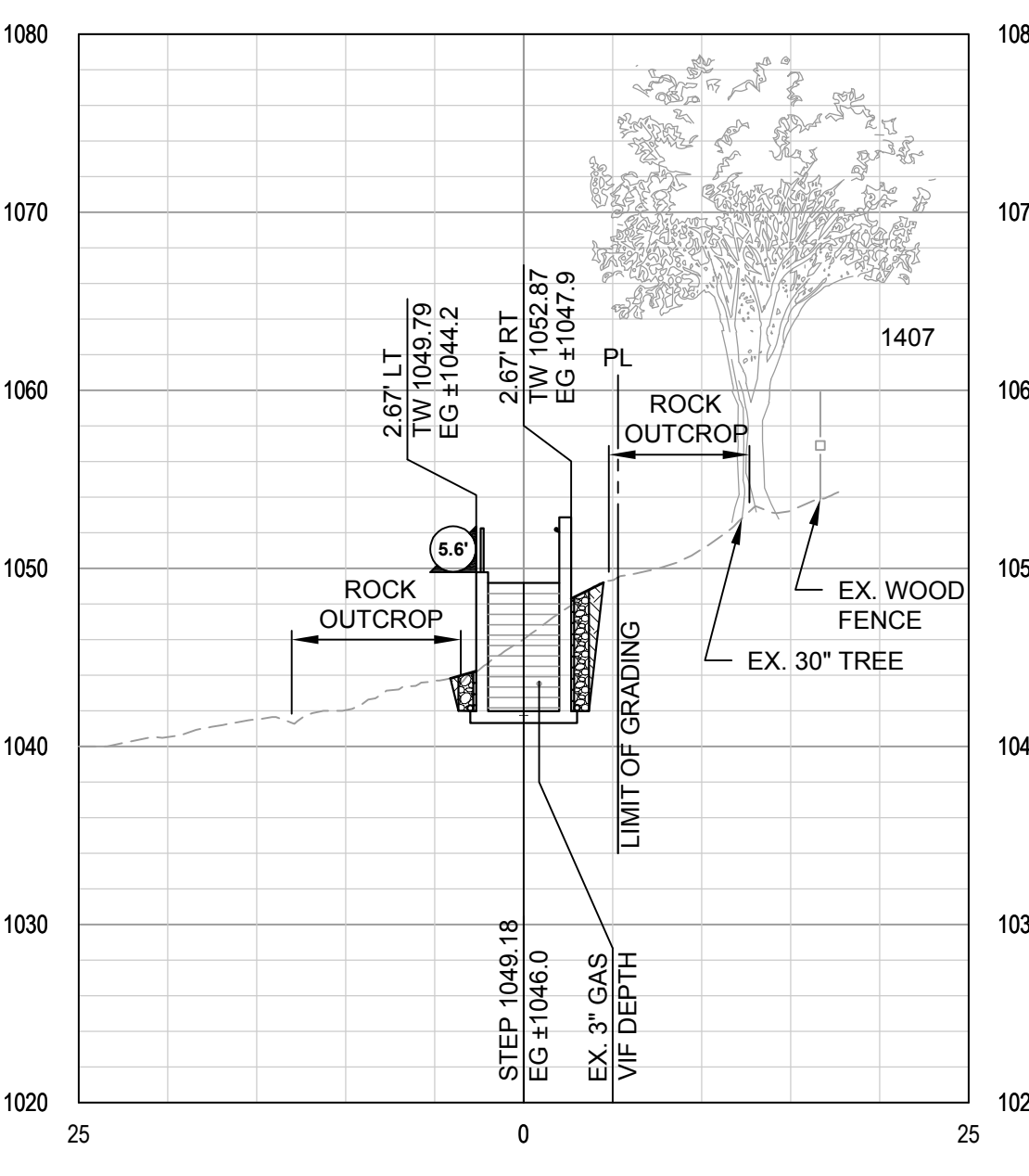
CL STAIR PROFILE
SCALE: HOR. 1" = 10' VERT. 1" = 10'



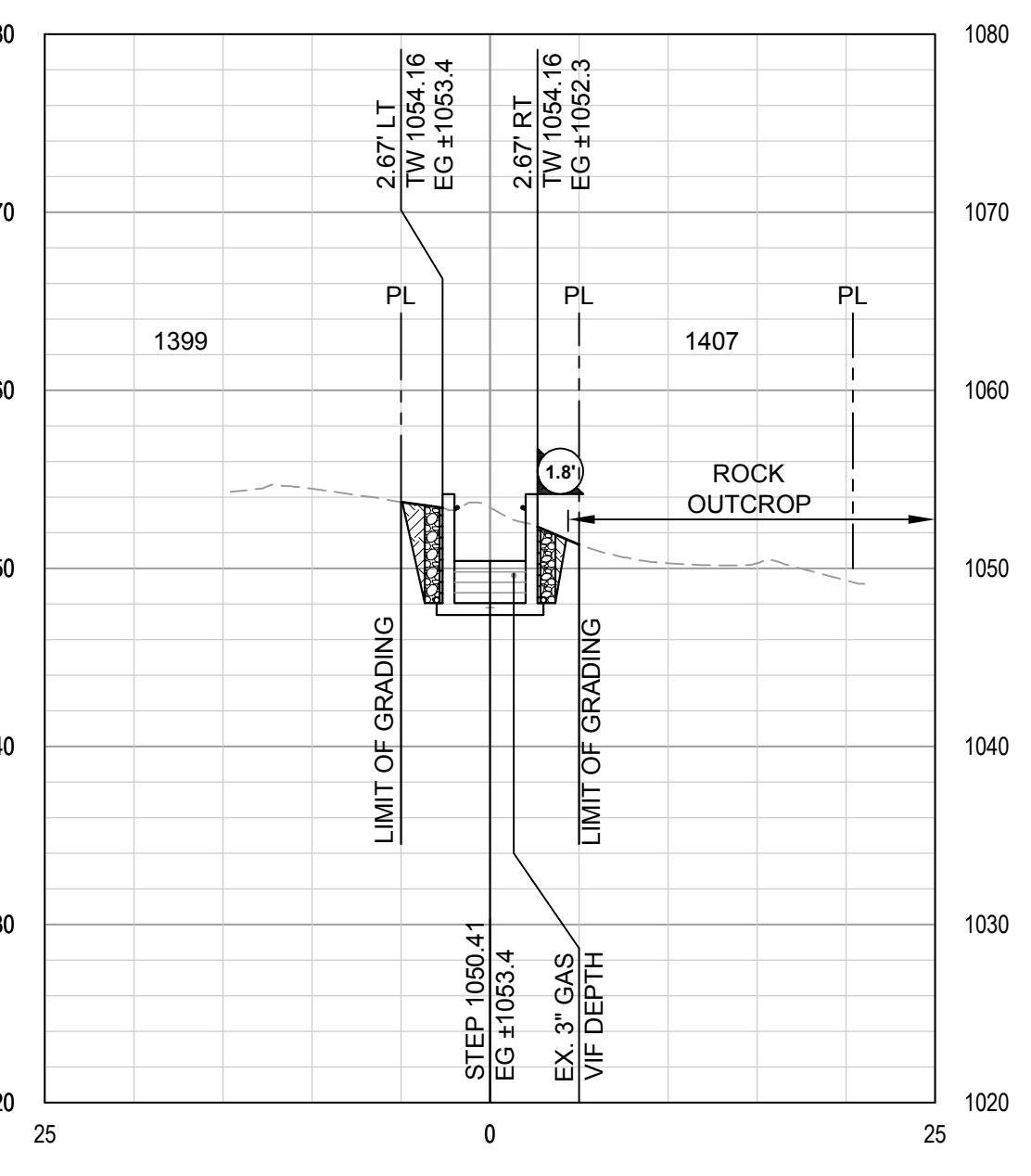
RT WALL PROFILE
SCALE: HOR. 1" = 10' VERT. 1" = 10'



SECTION 1 PROFILE (CL STA: 1+16)
SCALE: HOR. 1" = 10' VERT. 1" = 10'



SECTION 2 PROFILE (CL STA: 1+25)
SCALE: HOR. 1" = 10' VERT. 1" = 10'



SECTION 3 PROFILE (CL STA: 1+31)
SCALE: HOR. 1" = 10' VERT. 1" = 10'

NOTES

- CONTRACTOR SHALL MAINTAIN CLEARANCES FOR FIRE APPARATUS AT ALL TIMES. SHOULD ANY WORK LIMIT FIRE ACCESS, CONTRACTOR SHALL PROVIDE TWO BUSINESS DAYS NOTICE TO BERKELEY FIRE DEPARTMENT (BFD). CONTRACTOR SHALL PROVIDE ALTERNATE ACCESS PLANS TO BFD FOR APPROVAL PRIOR TO LIMITING ACCESS.
- CONTRACTOR SHALL PROTECT IN PLACE ALL FIRE HYDRANTS AND MAINTAIN FIRE ACCESS AT ALL TIMES. HYDRANTS AT EAST SIDE OF QUEENS ROAD AT TOP OF THE PATH AND AT SOUTH SIDE OF THE BOTTOM OF THE PATH AT CAMPUS DRIVE.
- STAIR LANDINGS SHALL BE SLOPED AT 2% MAX IN ALL DIRECTIONS AND HAVE POSITIVE DRAINAGE TOWARD QUEENS ROAD.
- CONTRACTOR SHALL CONTACT THE CITY ARBORIST AT LEAST 48 HOURS IN ADVANCE OF PERFORMING ANY WORK UNDER THE DRIP LINE OF EXISTING TREES AND WHEN EXCAVATION IS PLANNED WITHIN THE ROOT SYSTEM OF THE TREE. CITY ARBORIST SHALL ASSESS EACH TREE TO DETERMINE THE ALLOWABLE EXTENT OF ROOT AND BRANCH PRUNING. NO PRUNING OF THE TREE'S CROWN SHALL BE PERMITTED. SEE DETAIL 1, SHEET C2.1 FOR TREE PROTECTION MEASURES.
- CONTRACTOR SHALL FILL VOID SPACE BETWEEN BOTTOM OF STAIR SECTION AND TOP OF WALL FOOTING WITH ENGINEERED FILL AS APPROVED IN THE GEOTECHNICAL REPORT. FILL SHALL BE CLASS II AB WHERE COMPETENT BEDROCK DOES NOT EXIST BELOW WALL FOOTING (VIF). SEE GEOTECHNICAL REPORT FOR ADDITIONAL REQUIREMENTS.
- PROTECT IN PLACE EXISTING TREE (BLUE GUM). NO PRUNING OF THE TREE'S CROWN SHALL BE PERMITTED. SEE DETAIL 1, SHEET C2.1 FOR TREE PROTECTION MEASURES. INSTALL TREE PROTECTION ZONE (TPZ) FIVE FEET MINIMUM FROM THE TRUNK. CONTRACTOR SHALL NOT STORE, DUMP, OR PLACE MATERIALS WITHIN THE TPZ. TPZ FENCING SHALL BE POSTED WITH SIGNS STATING, "TREE PROTECTION FENCE - DO NOT MOVE OR REMOVE WITHOUT APPROVAL FROM CITY ARBORIST".



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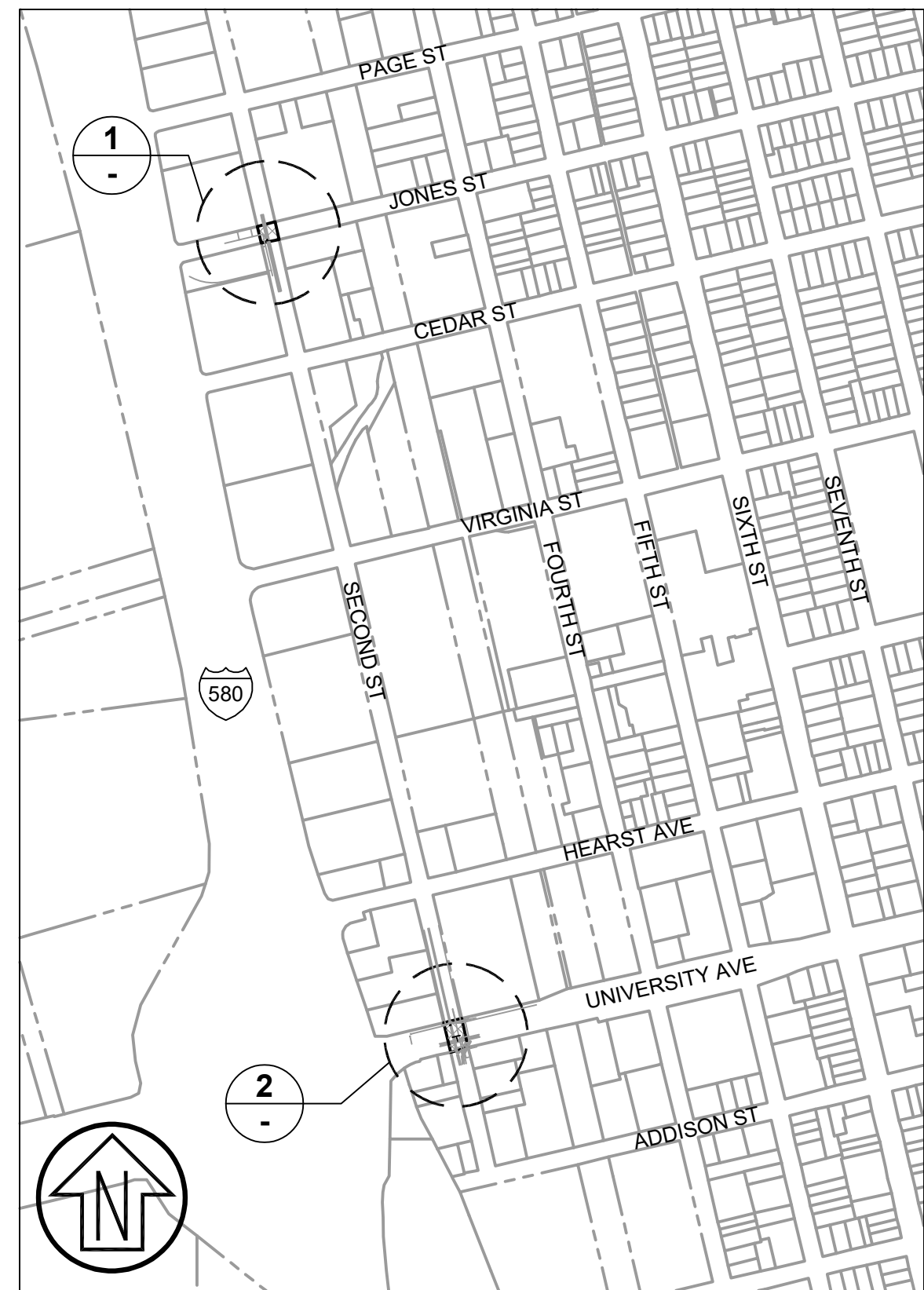
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 SUBMITTED: _____ DATE _____
 SUPERVISING ENGINEER: _____ DATE _____
 APPROVED: _____ DATE _____
 CITY ENGINEER: _____ DATE _____

DESIGN: _____ JD _____
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 CHECK: _____ JD _____
 AS BUILT: _____ DATE: 03/22/2024

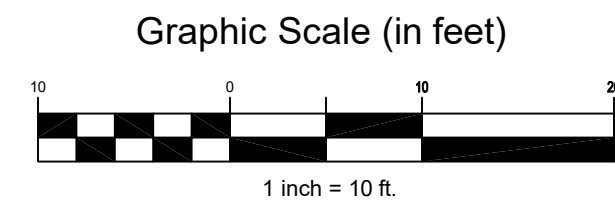
CITY OF BERKELEY
 DEPARTMENT OF PUBLIC WORKS

FY 2023 RETAINING WALL AND STORM DRAIN IMPROVEMENT PROJECT
 IMPROVEMENT PLAN
 UPPER COLUMBIA PATH

REVISION	MARK	DATE	APPROVAL



KEY MAP
SCALE: 1" = 500'

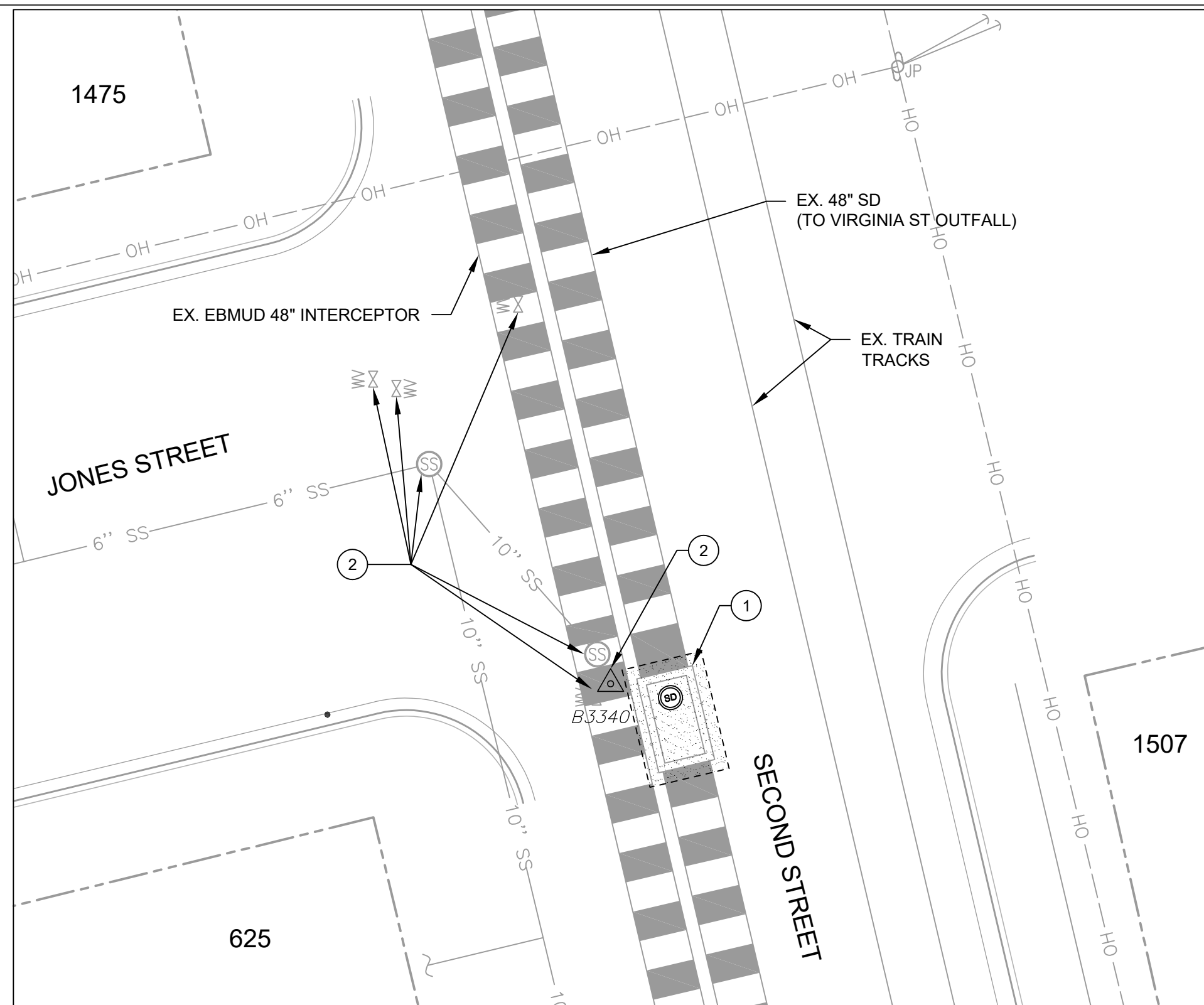


NOTES

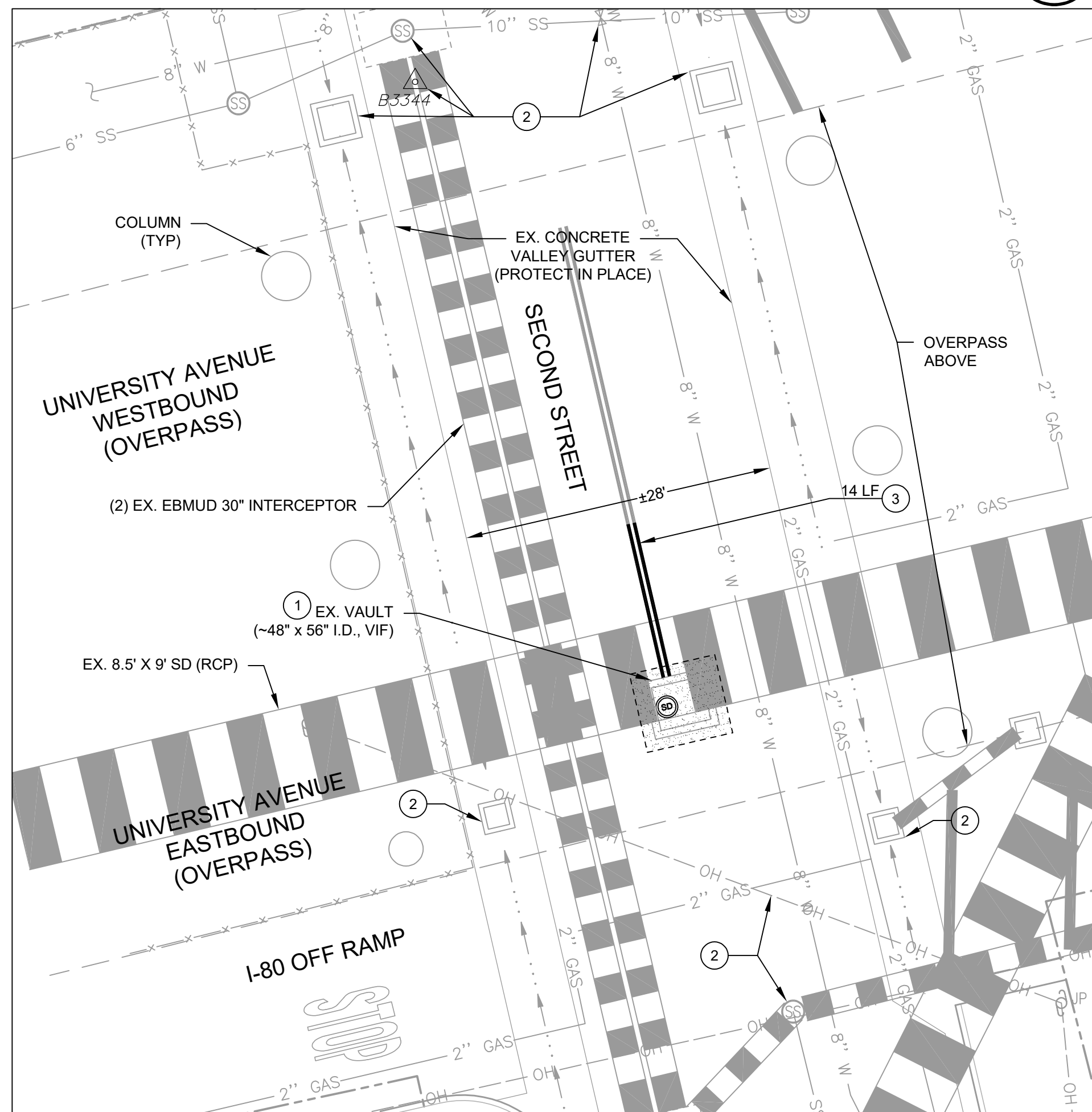
- CONTRACTOR SHALL MAINTAIN CLEARANCES FOR FIRE APPARATUS AT ALL TIMES. SHOULD ANY WORK LIMIT FIRE ACCESS, CONTRACTOR SHALL PROVIDE TWO BUSINESS DAYS NOTICE TO BERKELEY FIRE DEPARTMENT (BFD). CONTRACTOR SHALL PROVIDE ALTERNATE ACCESS PLANS TO BFD FOR APPROVAL PRIOR TO LIMITING ACCESS.
- CONTRACTOR SHALL PROTECT IN PLACE ALL FIRE HYDRANTS AND MAINTAIN FIRE ACCESS AT ALL TIMES. HYDRANTS AT NORTHEAST QUADRANT OF 2ND STREET AND JONES STREET INTERSECTION, AND AT NORTHEAST QUADRANT OF 2ND STREET AND UNIVERSITY AVENUE INTERSECTION.
- COB RECORDS INDICATE THAT THESE AREAS ARE TIDALLY INFLUENCED.

KEYNOTES

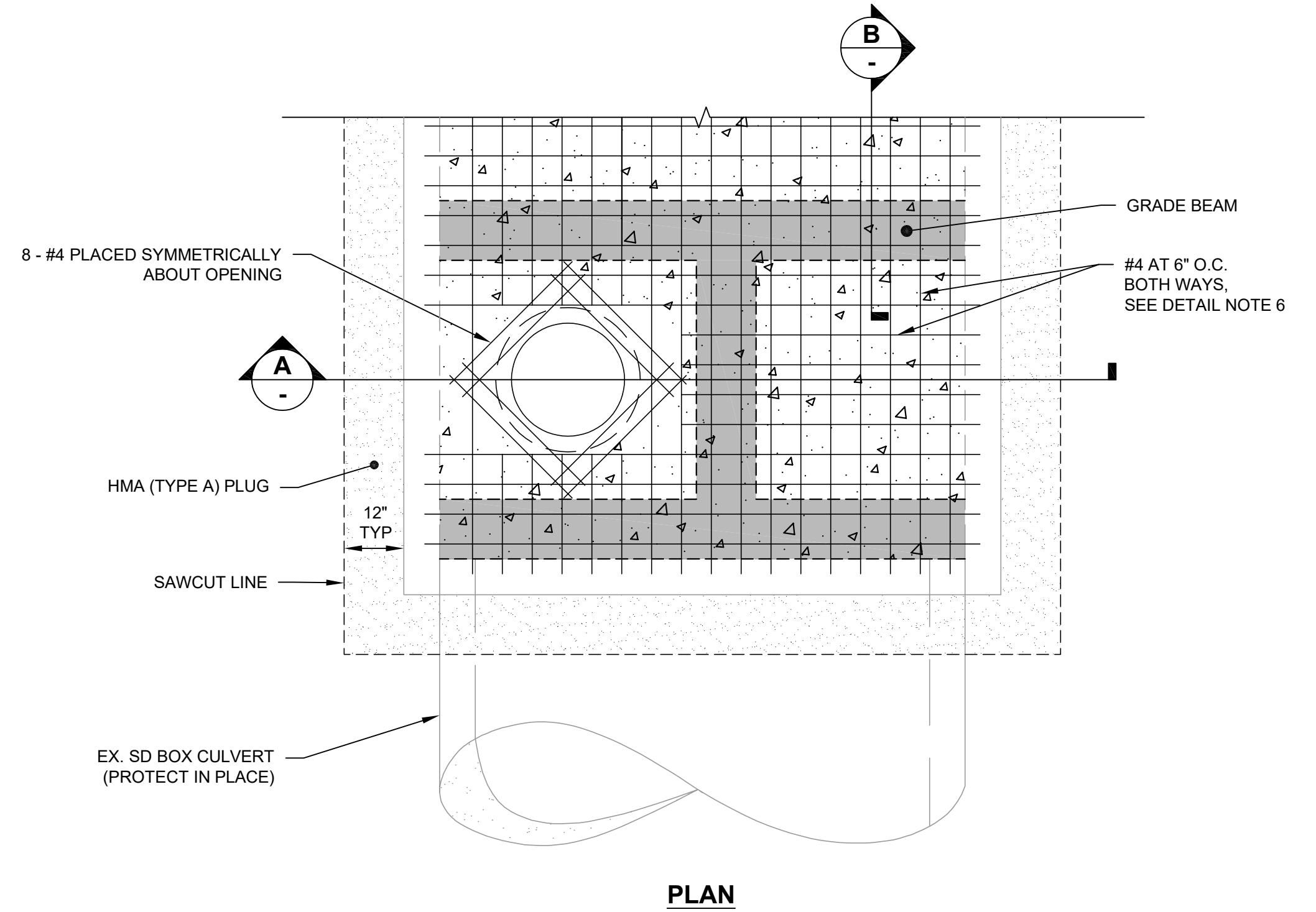
- CONVERT EX. STORM DRAIN STRUCTURE TO STANDARD MAINTENANCE HOLE ACCESS PER DETAIL A, THIS SHEET (REMOVE AND DISPOSE EX. STEEL DOORS)
- PROTECT IN PLACE EX. UTILITY (INCLUDING BOXES, PIPES, OVERHEAD WIRE, GUY ANCHORS, ETC AND ANY OTHER APPURTENANCES)
- MODIFIED NO PASSING ZONES-TWO DIRECTION PER DETAIL 22, STANDARD PLAN A20A (4" YELLOW)



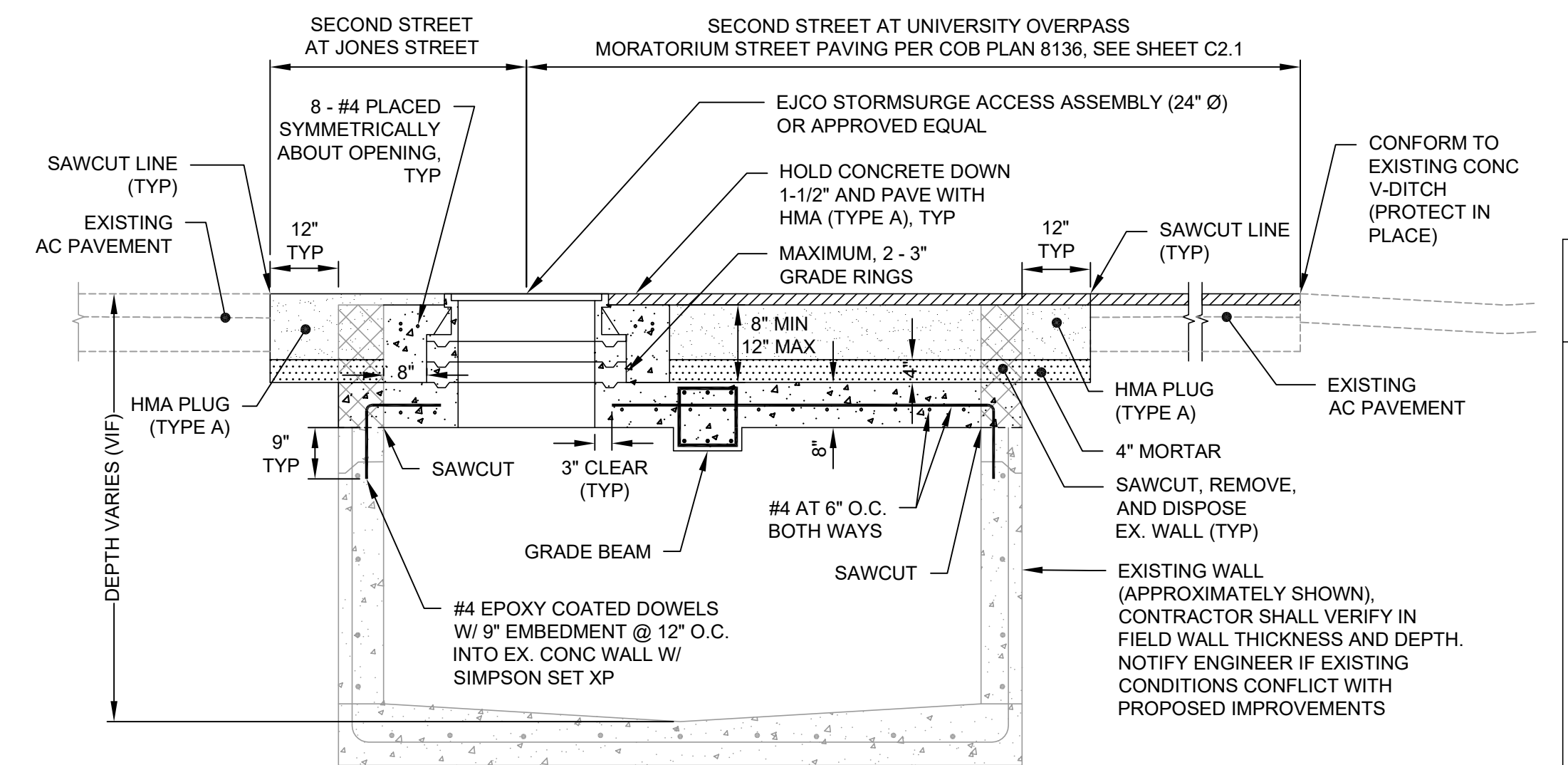
1 SECOND STREET AT JONES STREET
SCALE: 1" = 10'



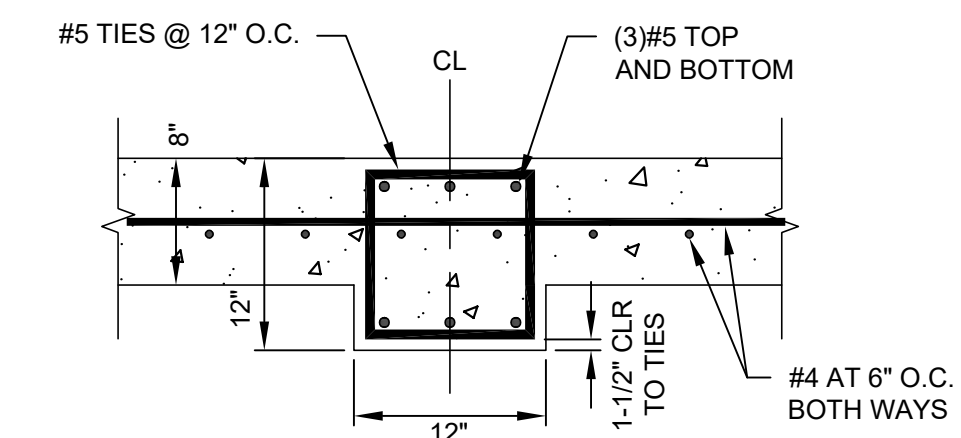
2 SECOND STREET AT UNIVERSITY AVENUE (MORATORIUM STREET)
SCALE: 1" = 10'



PLAN



SECTION A



GRADE BEAM SECTION B

NOTES

- LOCATION OF THE MAINTENANCE HOLE FRAME AND COVER SHALL BE IDENTIFIED IN THE FIELD BY THE ENGINEER.
- CONCRETE SHALL BE CLASS "A" (6 SACK), EXCEPT CAST-IN-PLACE CONCRETE COLLARS SHALL CONFORM TO SPECIFICATIONS (GREENBOOK) SECTION 201-1.1.2 AND BE CLASS 560-B-3250.
- NO CONCRETE SHALL BE PLACED PRIOR TO FORM AND STEEL INSPECTION BY THE ENGINEER.
- MAINTENANCE HOLE FRAME MAY BE ADJUSTED EITHER BEFORE OR AFTER PAVING, BUT THE FINAL GRADE OF THE FRAME SHALL MATCH THAT OF THE ADJACENT PAVEMENT WITHIN 1/4".
- WHERE FRAME IS SET AFTER PAVING, EXPOSED CONCRETE SURFACES WILL NOT BE ALLOWED UNLESS APPROVED BY THE ENGINEER.
- PLACE REBAR MAT 3" CLEAR FROM BOTTOM OF NEW CONCRETE.

A EXISTING VAULT TO TURNING STRUCTURE W/ SDMH ACCESS
SCALE: NTS



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SUBMITTED:	DATE:	DESIGN:	JD	HORIZ.:	
SUPERVISING ENGINEER:	EXP.:	DRAWN:	DC	VERT.:	
APPROVED:	DATE:	CHECK:	JD	BOOK:	
CITY ENGINEER:	R.C.E.:	AS BUILT:		DATE:	03/22/2024

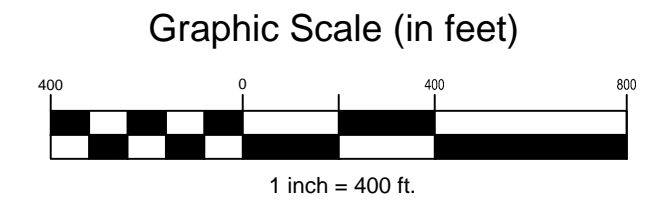
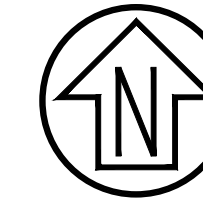
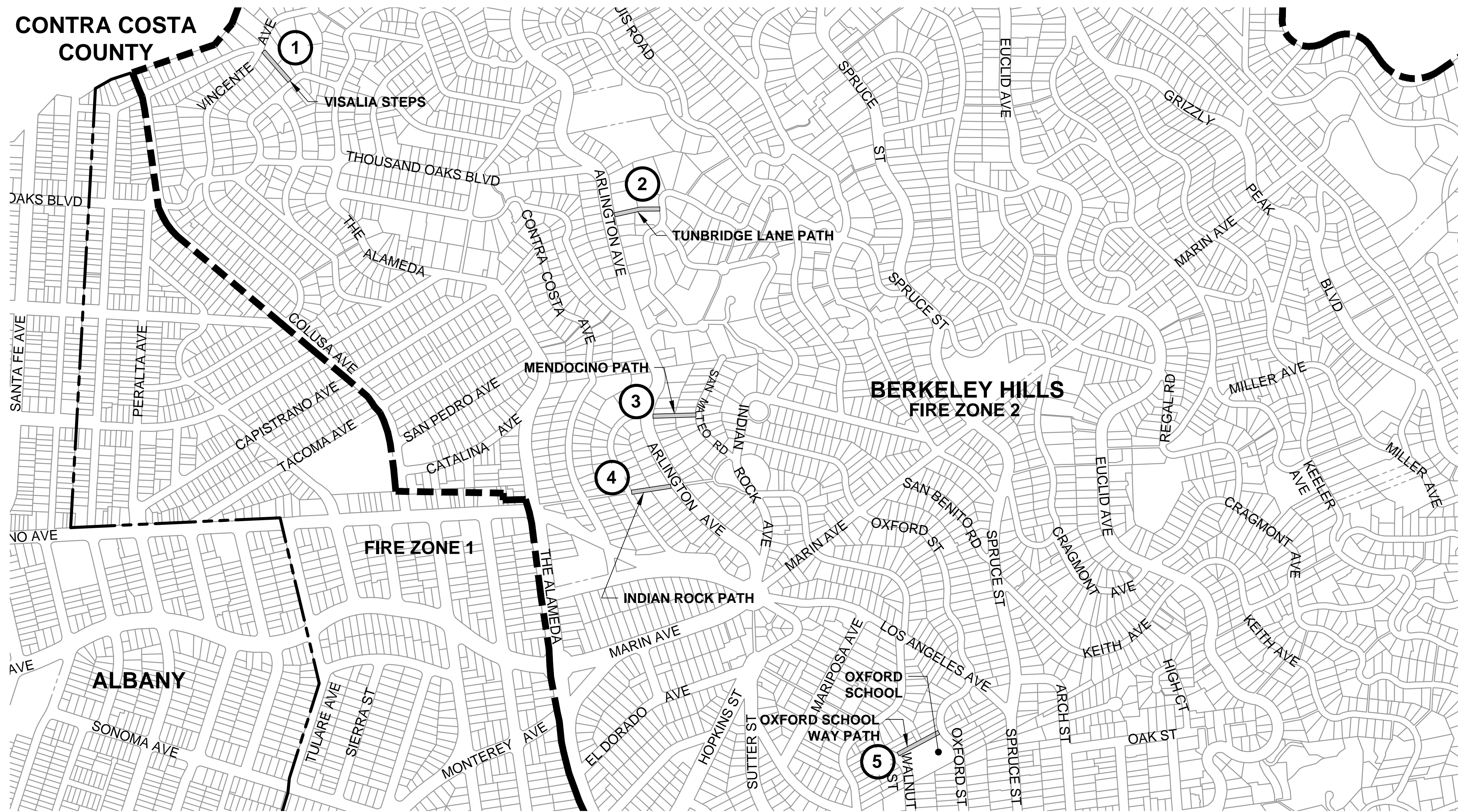
CITY OF BERKELEY
DEPARTMENT OF PUBLIC WORKS

FY 2023 RETAINING WALL AND STORM DRAIN IMPROVEMENT PROJECT
IMPROVEMENT PLAN
SECOND STREET STORM DRAIN

REVISION	MARK	DATE	DESCRIPTION	APPROVAL

PLAN 8278
FILE 503-636
C1.7
SHEET 10 OF 21

CONTRA COSTA COUNTY



LEGEND

①

CONCRETE PATH REPAIR NUMBER

PROJECT SITE

BERKELEY CITY LIMITS

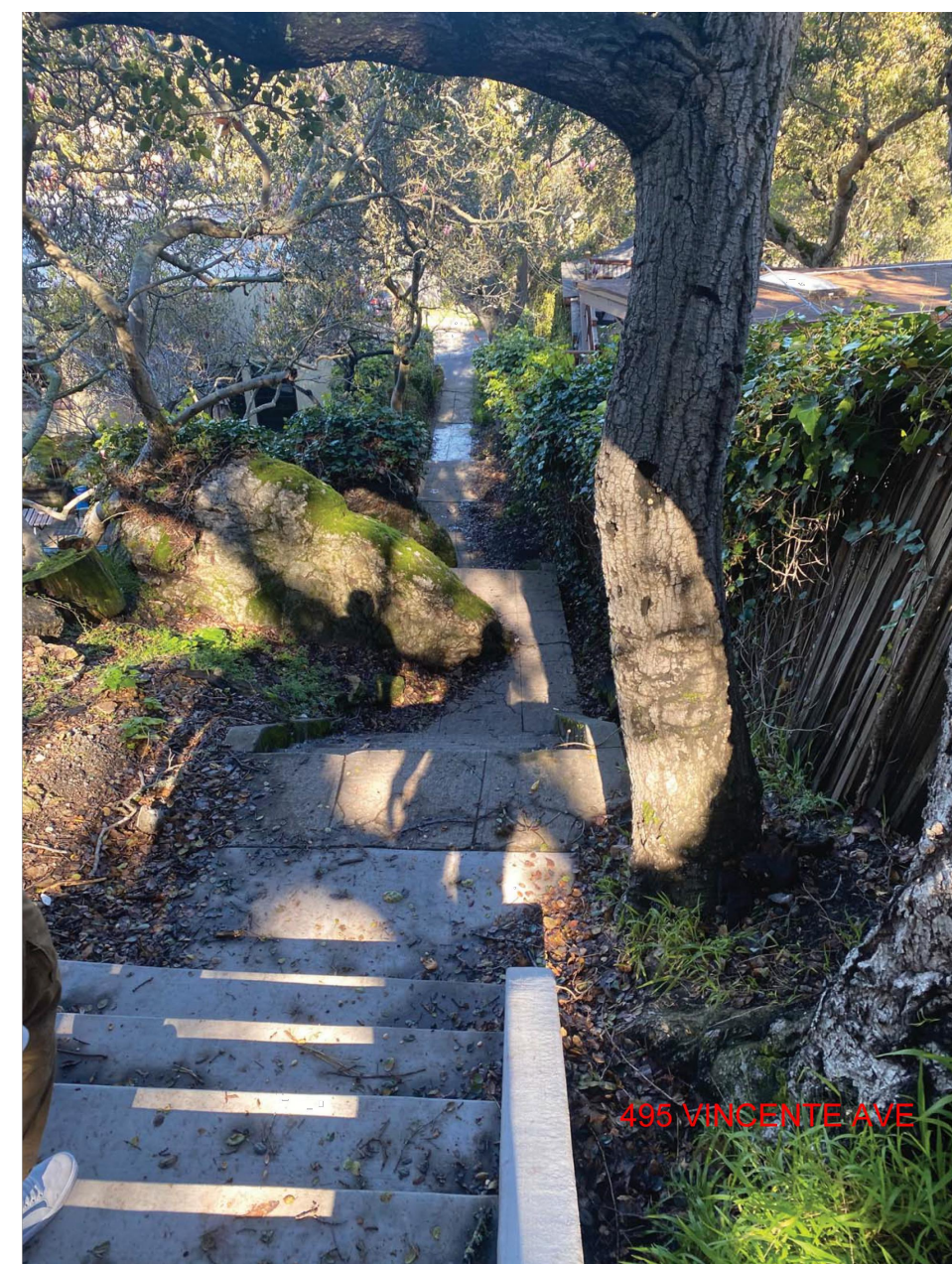
CITY OF BERKELEY FIRE ZONE 2

CONCRETE PATH REPAIR SUMMARY

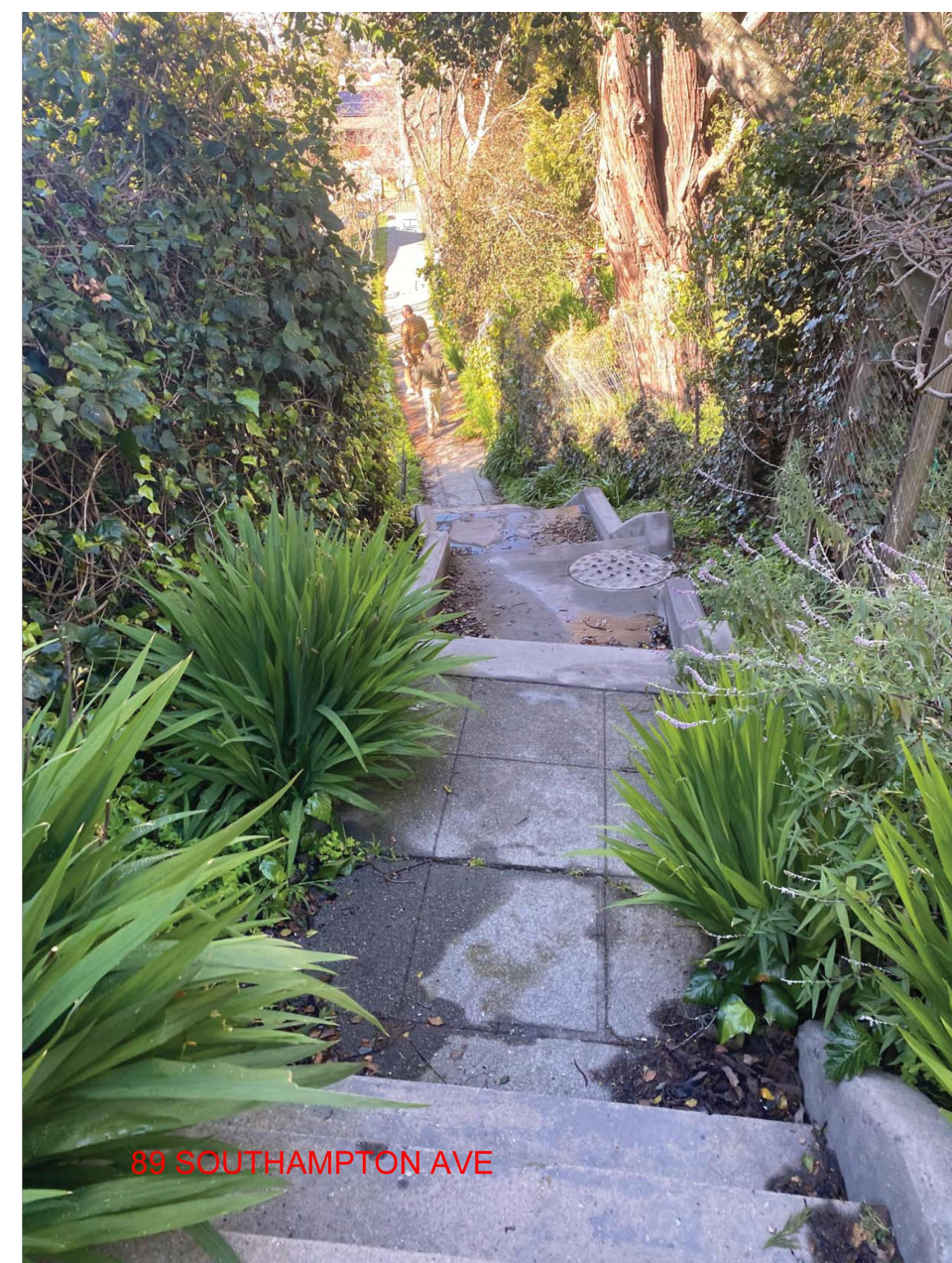
CONCRETE PATH REPAIR NUMBER	SITE NAME	ADDRESS	REMOVE & REPLACE PCC PATH
		#	(SF)
1	VISALIA STEPS	495 VINCENTE AVENUE	600
2	TUNBRIDGE LANE PATH	89 SOUTHAMPTON AVE	210
3	MENDOCINO PATH	45 SAN MATEO ROAD	1,075
4	INDIAN ROCK PATH	900 ARLINGTON ROAD	470
5	OXFORD SCHOOL WAY PATH	1125 WALNUT STREET	1,660

CONCRETE PATH REPAIR NOTES:

- NO HORIZONTAL OR VERTICAL CONTROL WILL BE PROVIDED FOR THE FORMING & PLACING OF PROPOSED CONCRETE PATH REPAIRS. THE CONTRACTOR SHALL WORK CLOSELY WITH THE ENGINEER DURING LAYOUT, DEMOLITION & PLACEMENT OF FORMWORK TO ENSURE NEW FACILITIES ARE CONSTRUCTED WITH SMOOTH CONFORMS, POSITIVE DRAINAGE, COMPLIANT SLOPES/DIMENSIONS AS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL NOTE THAT CLEAR AND GRUBB AND ADDITIONAL PAVEMENT AND/OR CONCRETE REMOVALS MAY BE REQUIRED AFTER INITIAL DEMOLITION AND DURING THE PLACEMENT OF FORMWORK TO ENSURE PROPER CONFORMING. SEE PLAN FOR CONCRETE PATH REPAIR LOCATIONS.
- ACCESS TO EACH CONCRETE PATH REPAIR SITE WILL BE LIMITED TO EITHER END OF THE CONNECTING STREETS. THE CONTRACTOR SHALL PLAN THEIR CONSTRUCTION OPERATIONS AND MATERIAL DELIVERY ACCORDINGLY.
- PRIOR TO COMMENCING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL VERIFY ALL INTERFACES BETWEEN EXISTING CONDITIONS AND NEW CONSTRUCTION. EACH SITE IS TYPICALLY NARROW AND WORK SPACE IS CONFINED BY, BUT NOT LIMITED TO FENCES, WALLS, ROCK OUTCROPS, BUILDINGS, ETC. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PROTECT IN PLACE EXISTING CONDITIONS UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- THE CONTRACTOR SHALL OPEN A UNDERGROUND SERVICE ALERT (U.S.A.) TICKET TO MARK UTILITIES A MINIMUM OF FIVE WORKING DAYS PRIOR TO DEMOLITION.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATION AND DEPTHS BY POTHOLES OR OTHER MEANS OF ALL UTILITIES WITH APPROPRIATE AGENCIES, AND TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES AND ANY OTHER LINES NOT OF RECORD. ANY CONFLICTS SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER.



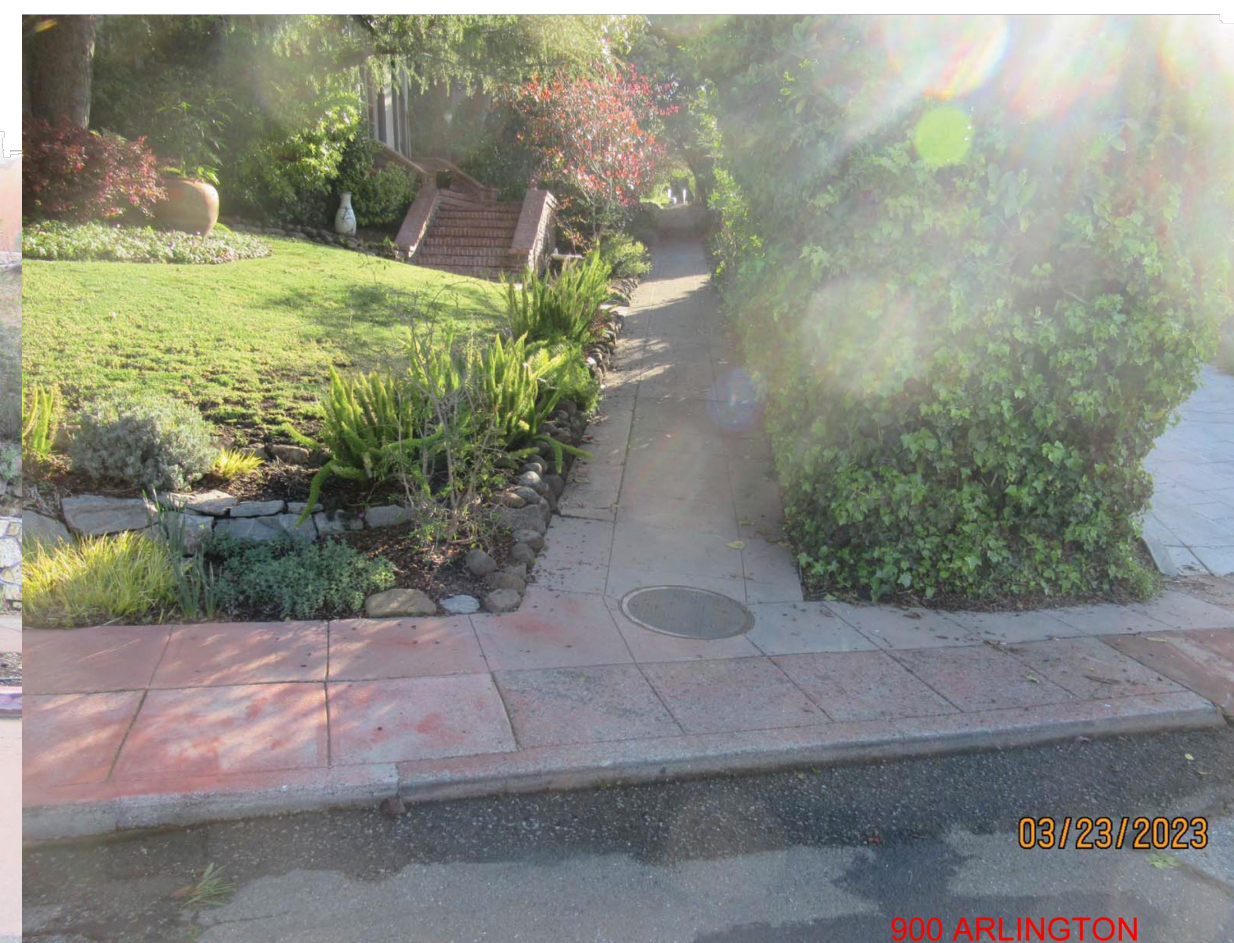
① VISALIA STEPS
SCALE: NTS



② TUNBRIDGE LANE PATH
SCALE: NTS



③ MENDOCINO PATH
SCALE: NTS



④ INDIAN ROCK PATH
SCALE: NTS



⑤ OXFORD SCHOOL WAY PATH
SCALE: NTS



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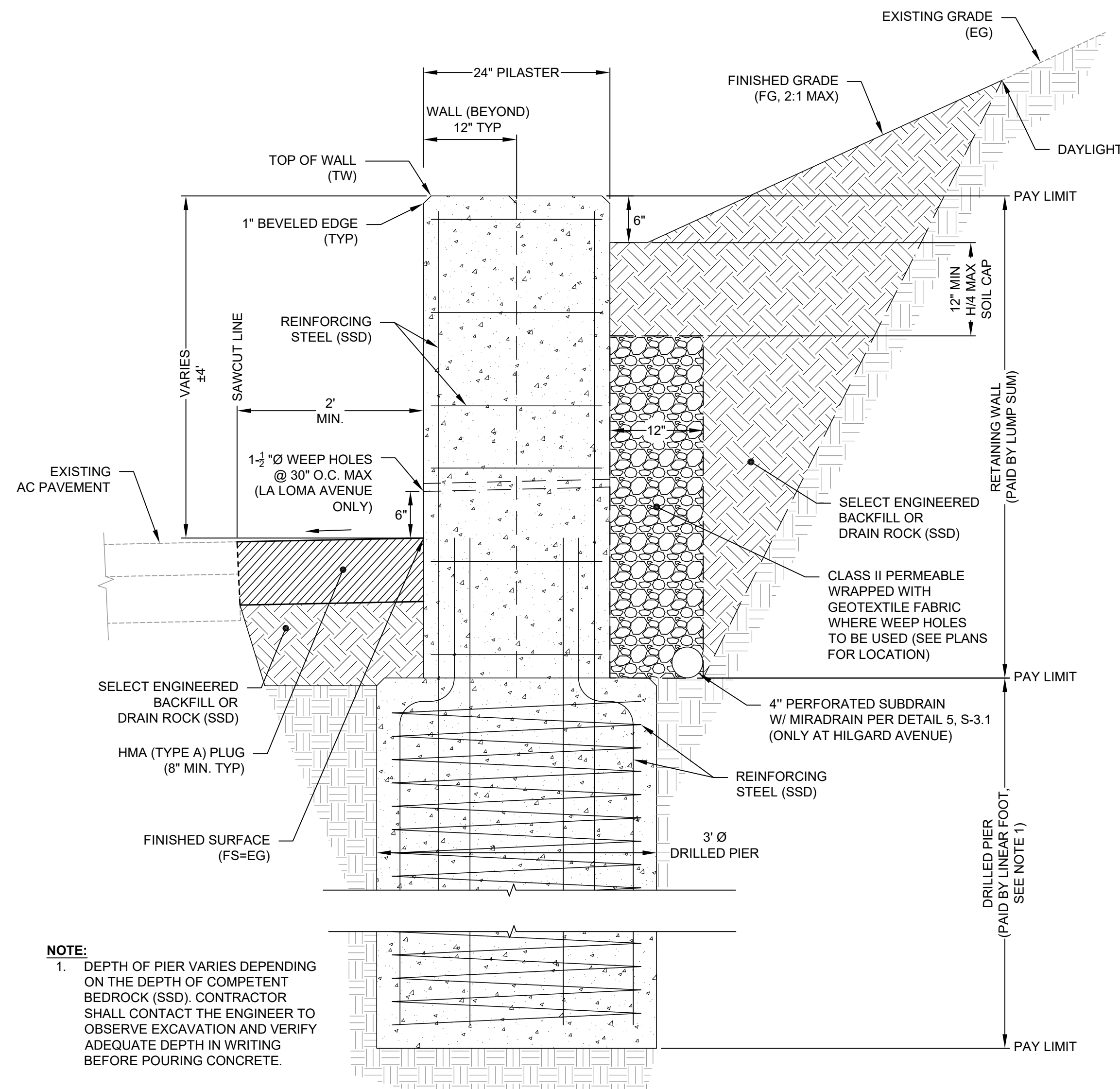
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 SURVEYING ENGINEER _____ DATE _____
 EXP. _____ DATE _____
 R.C.E. _____ DATE _____
 EXP. _____ DATE _____

DESIGN: _____ JD _____
 DRAWN: _____ DC _____
 CHECK: _____ JD _____
 AS BUILT: _____ DATE: 03/22/2024

HORIZ. AS NOTED
 VERT. _____
 BOOK _____
 DATE: 03/22/2024

CITY OF BERKELEY
 DEPARTMENT OF PUBLIC WORKS
 FY 2023 RETAINING WALL AND STORM DRAIN IMPROVEMENT PROJECT
 IMPROVEMENT PLAN
 CONCRETE PATH REPAIR

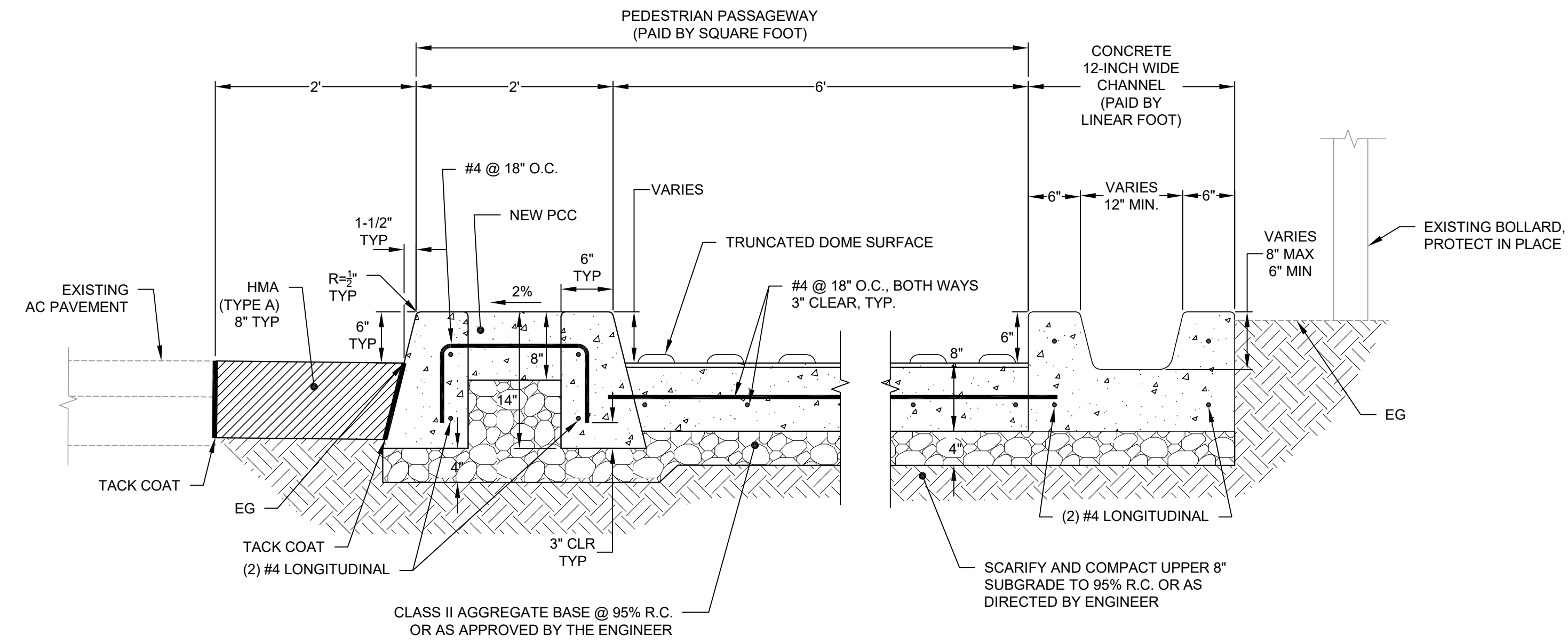
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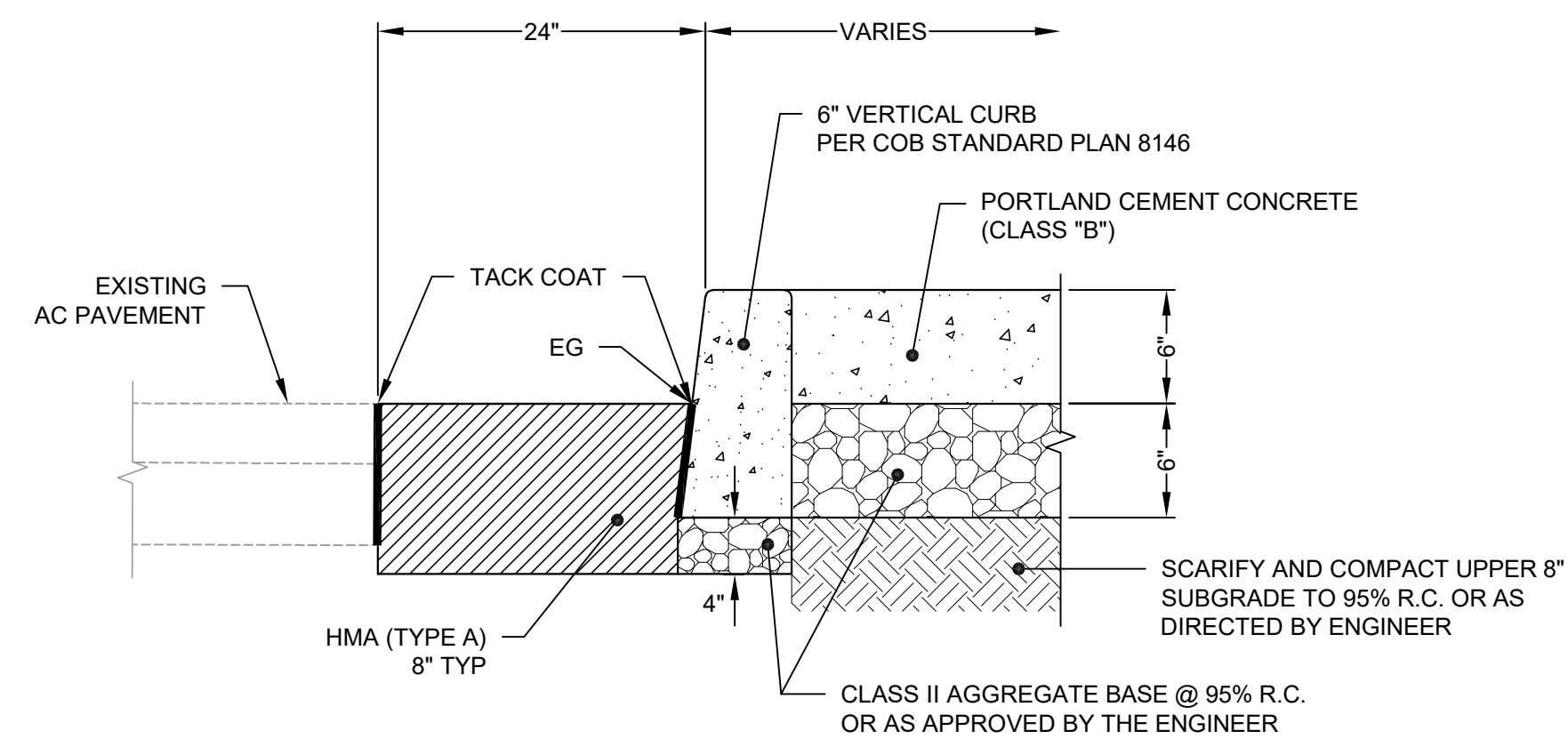
1 RETAINING WALL
SCALE: 1" = 1'

NOTE:
1. DEPTH OF PIER VARIES DEPENDING ON THE DEPTH OF COMPETENT BEDROCK (SSD). CONTRACTOR SHALL CONTACT THE ENGINEER TO OBSERVE EXCAVATION AND VERIFY ADEQUATE DEPTH IN WRITING BEFORE POURING CONCRETE.

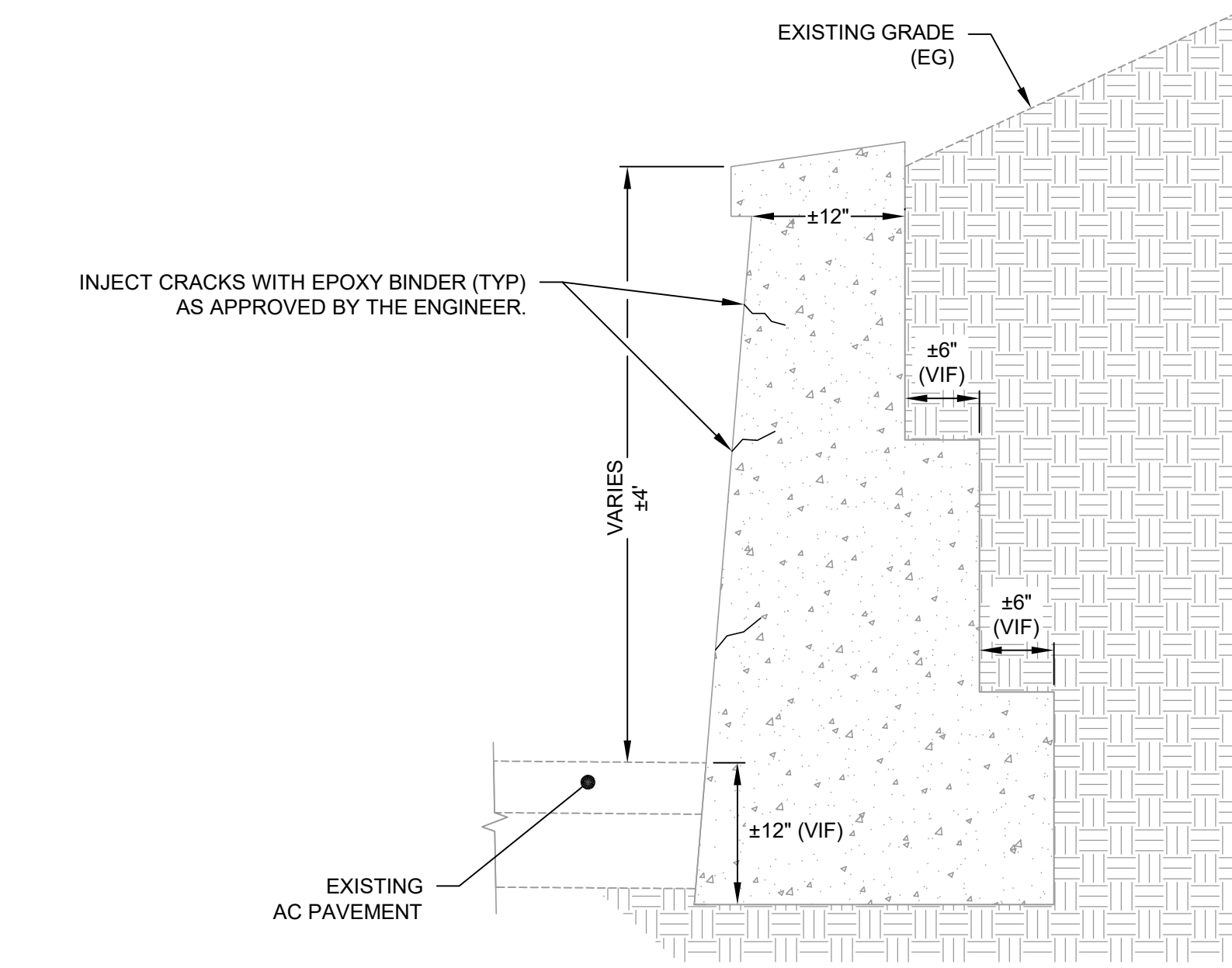
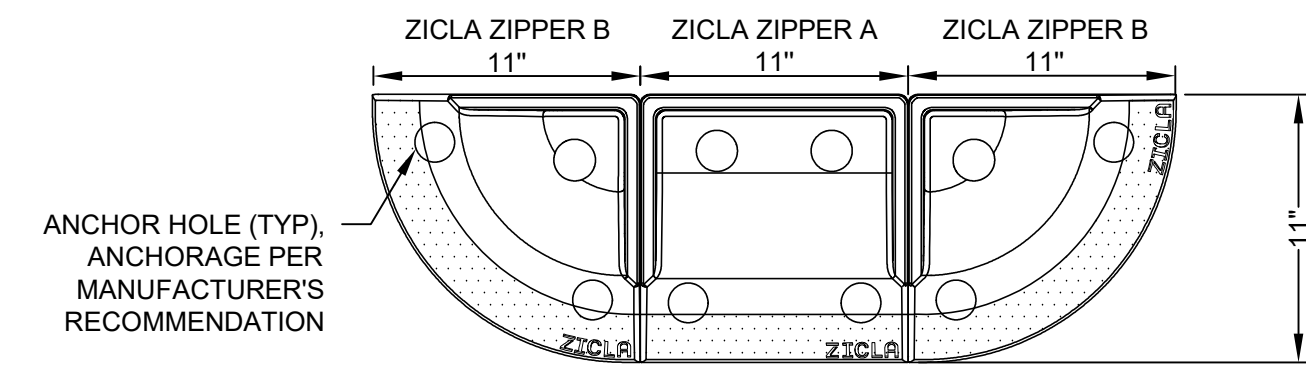
3 PEDESTRIAN PASSAGEWAY
SCALE: 1" = 1'



4 PEDESTRIAN MEDIAN BARRIER
SCALE: 1" = 1'



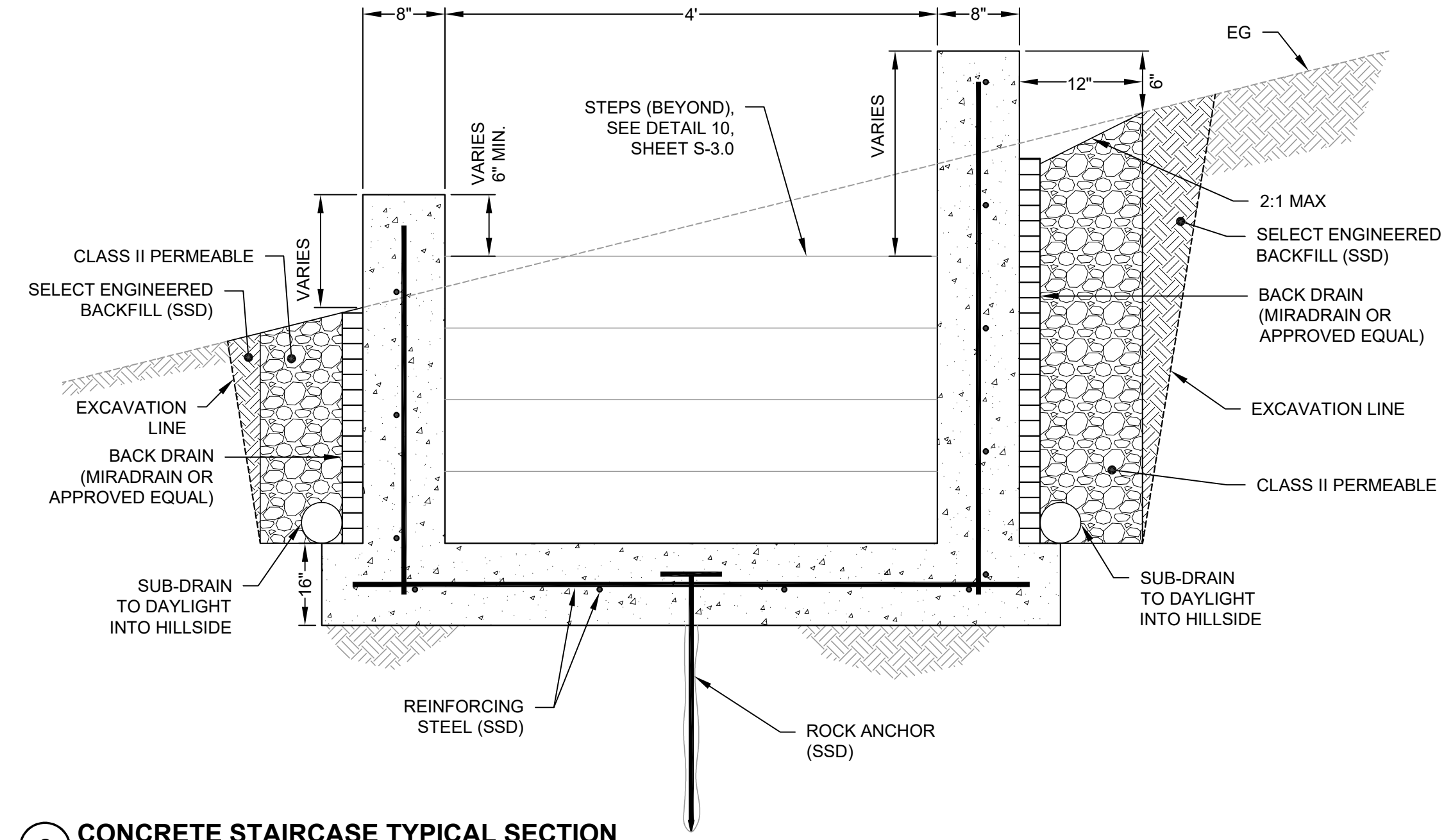
5 ZICLA ZIPPER BAB DETAIL
SCALE: NTS



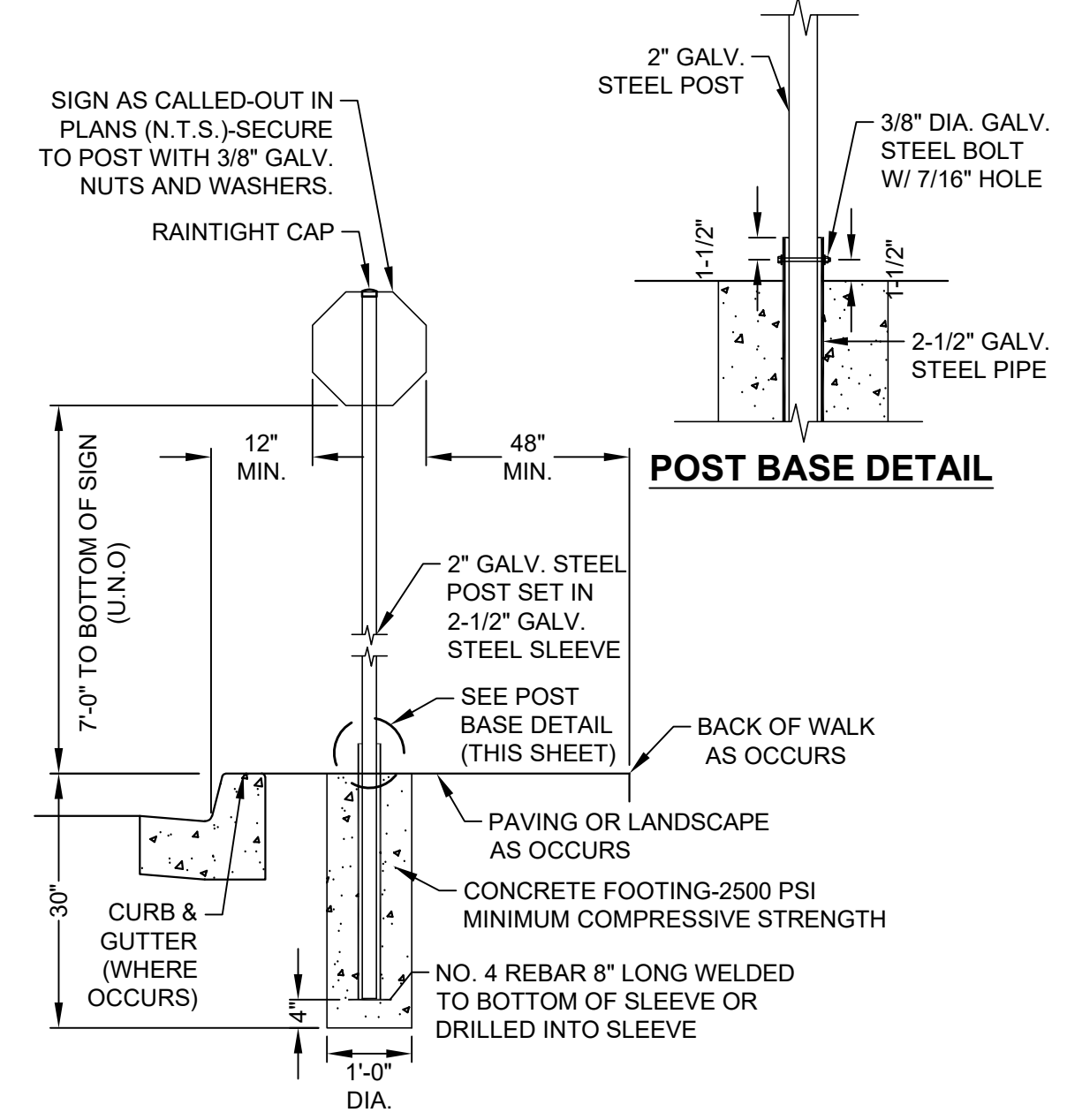
2 EXISTING WALL SECTION
SCALE: 1" = 1'

NOTE:
1. FOOTING IS SCHEMATICALLY SHOWN FOR REFERENCE ONLY AND IS BASED ON AVAILABLE RECORD DATA. CONTRACTOR SHALL FIELD DETERMINE DEPTH AND EXTENTS OF FOOTING FOR POTENTIAL CONFLICTS WITH NEW RETAINING WALL.

6 CONCRETE STAIRCASE TYPICAL SECTION
SCALE: 1" = 1'



7 TRAFFIC SIGN INSTALLATION DETAIL
SCALE: 1" = 2'



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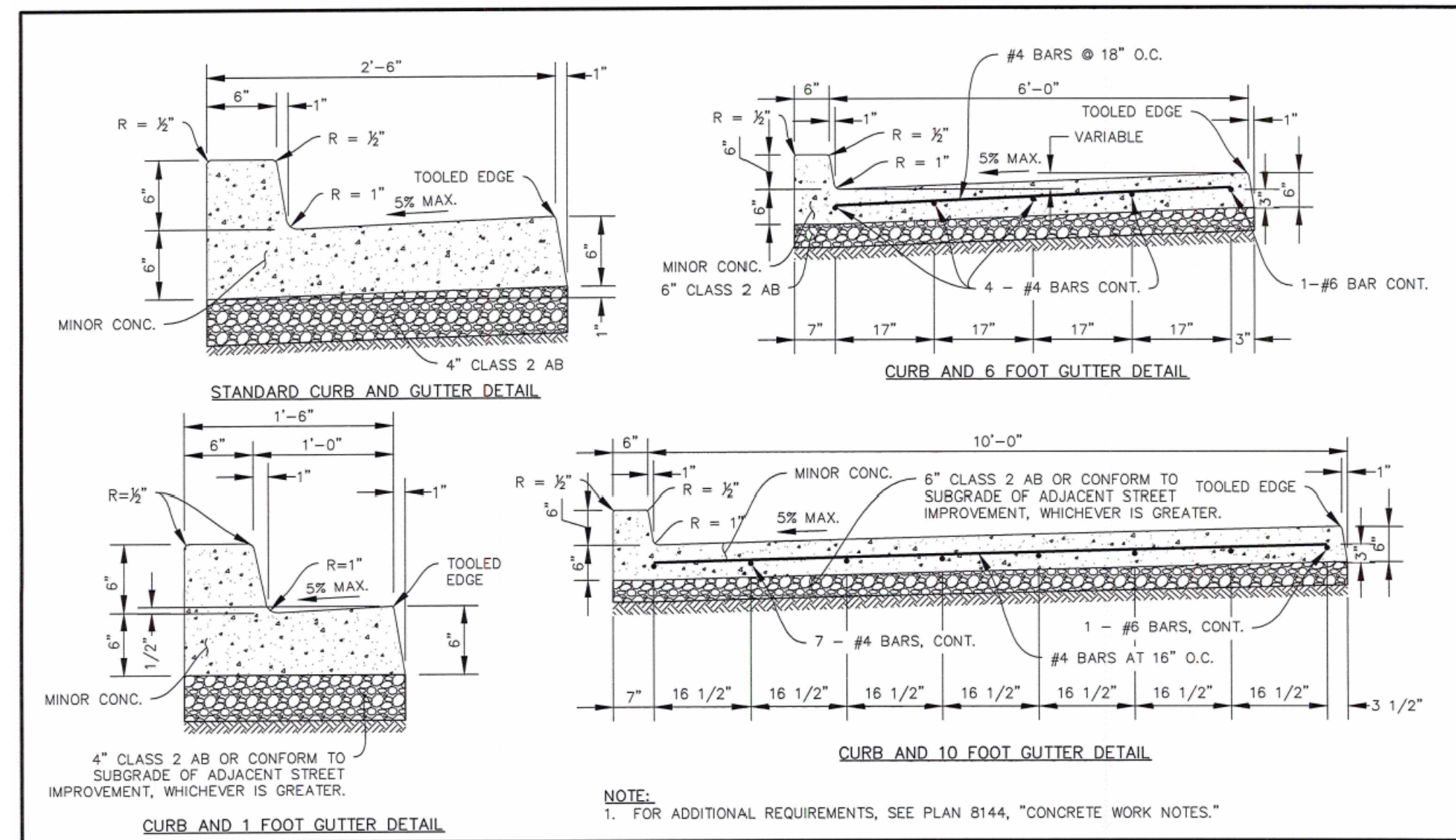
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REGISTER: _____
SUPERVISING ENGINEER: _____ EXP. _____
APPROVED: _____ DATE _____
CITY ENGINEER: _____ R.C.E. _____
AS BUILT: _____ EXP. _____

DESIGN: _____ JD _____
DRAWN: _____ DC _____
CHECK: _____ JD _____
DATE: 03/22/2024

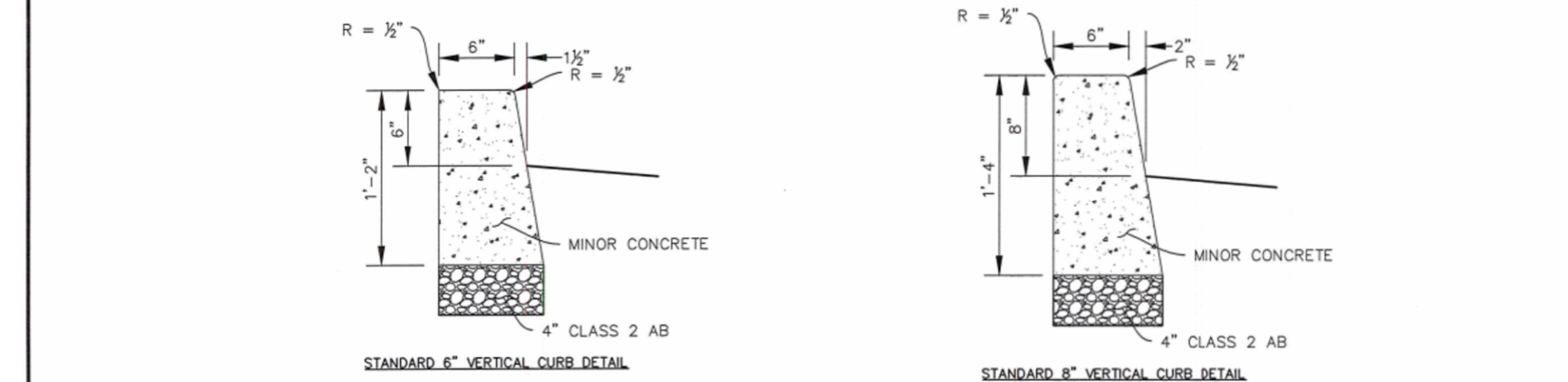
CITY OF BERKELEY
DEPARTMENT OF PUBLIC WORKS
FY 2023 RETAINING WALL AND STORM DRAIN IMPROVEMENT PROJECT
TYPICAL SECTIONS

PLAN 8278
FILE 503-636
C2.0
SHEET 12 OF 21

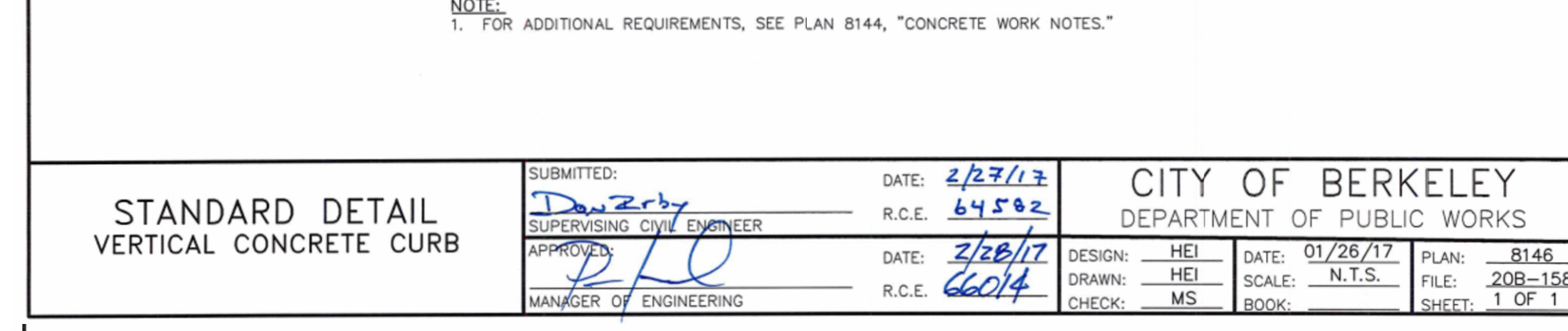
REVISION	MARK	DATE	DESCRIPTION	APPROVAL



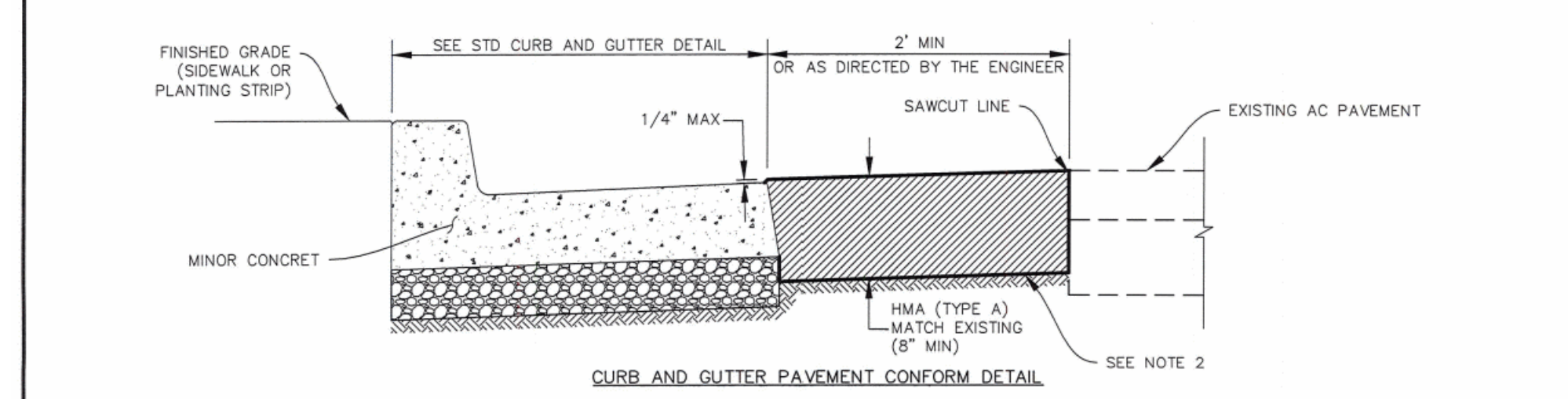
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SUPERVISING CIVIL ENGINEER		R.C.E. 64582	DEPARTMENT OF PUBLIC WORKS	
APPROVED: <i>P. L. O.</i>		DATE: 2/28/17	DESIGN: HEI	DATE: 01/26/17
MANAGER OF ENGINEERING		R.C.E. 66014	DRAWN: HEI	SCALE: N.T.S.
		CHECK: MS	BOOK:	PLAN: 8146
				FILE: 20B-157
				SHEET: 1 OF 1



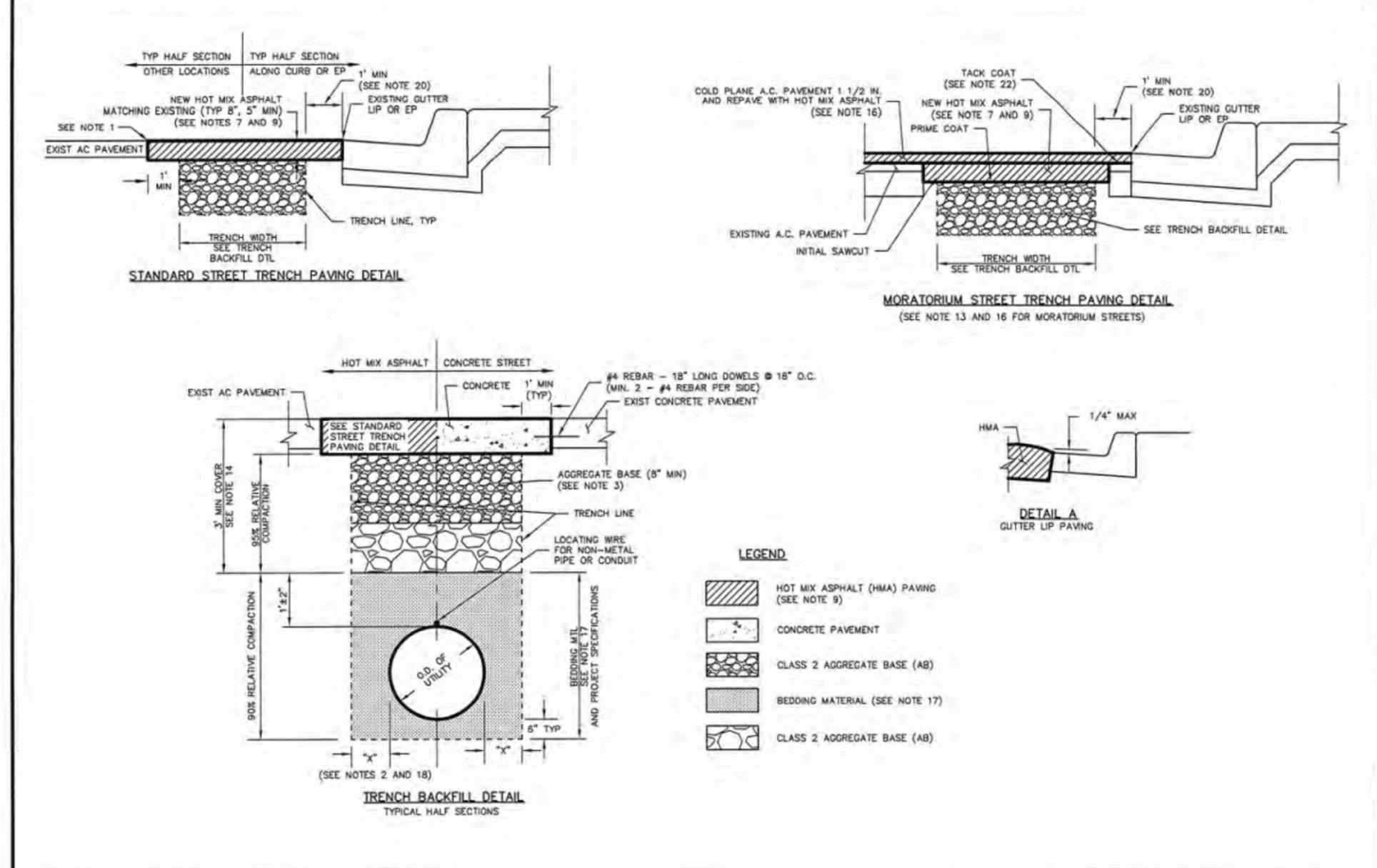
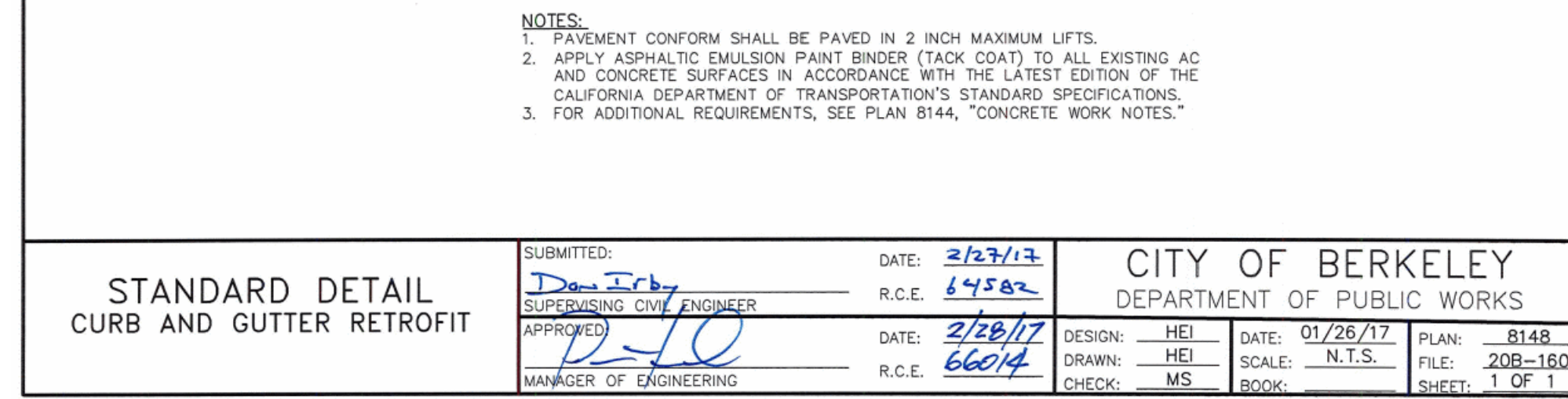
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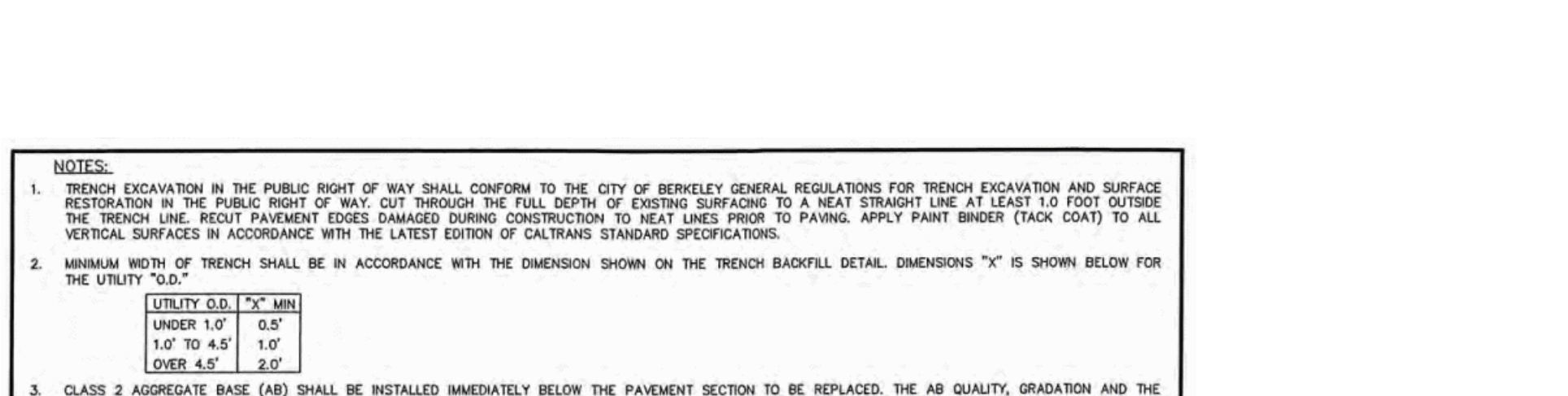
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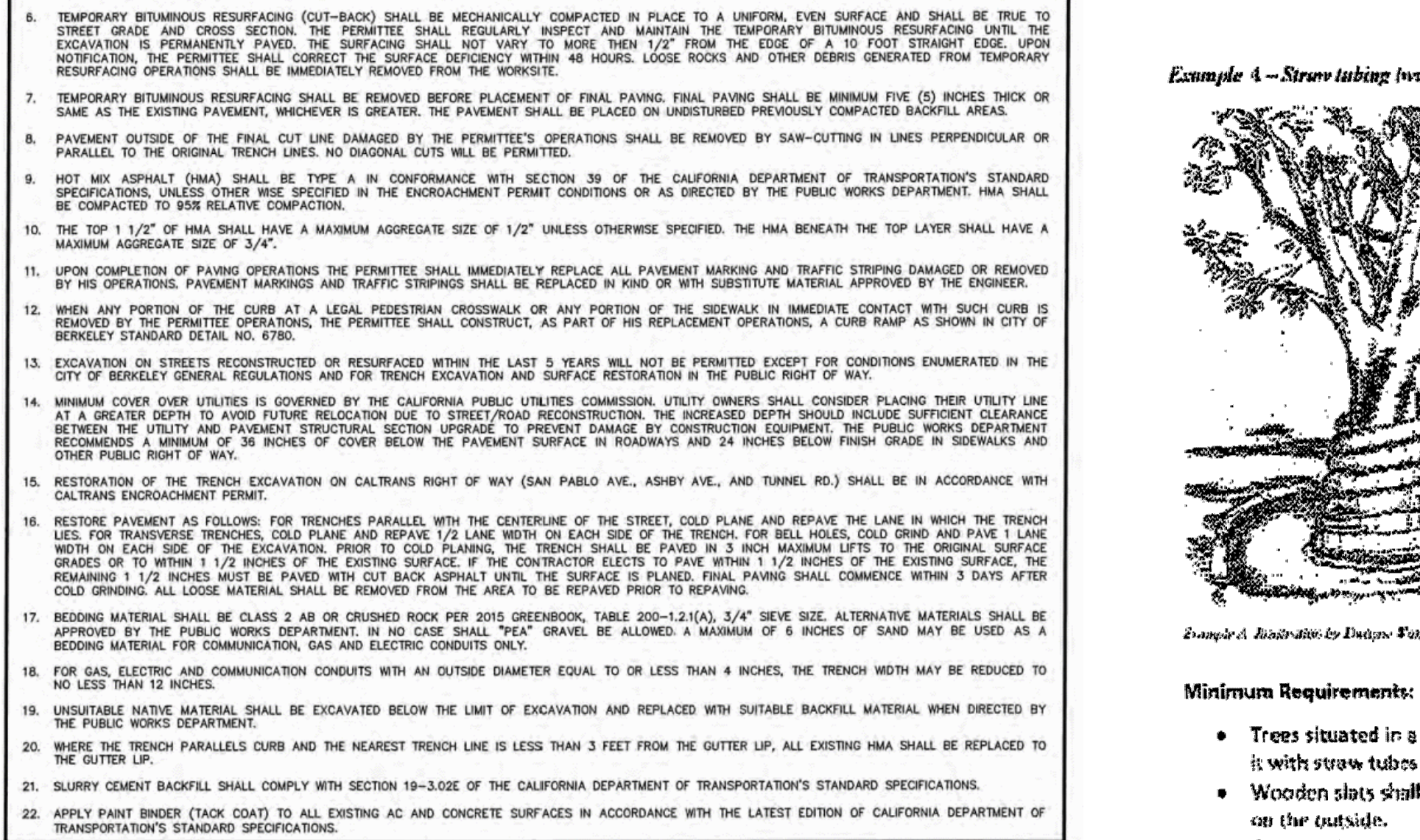
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APPROVED: <i>P. L. O.</i>		DATE: 2/28/17	DESIGN: HEI	DATE: 01/26/17
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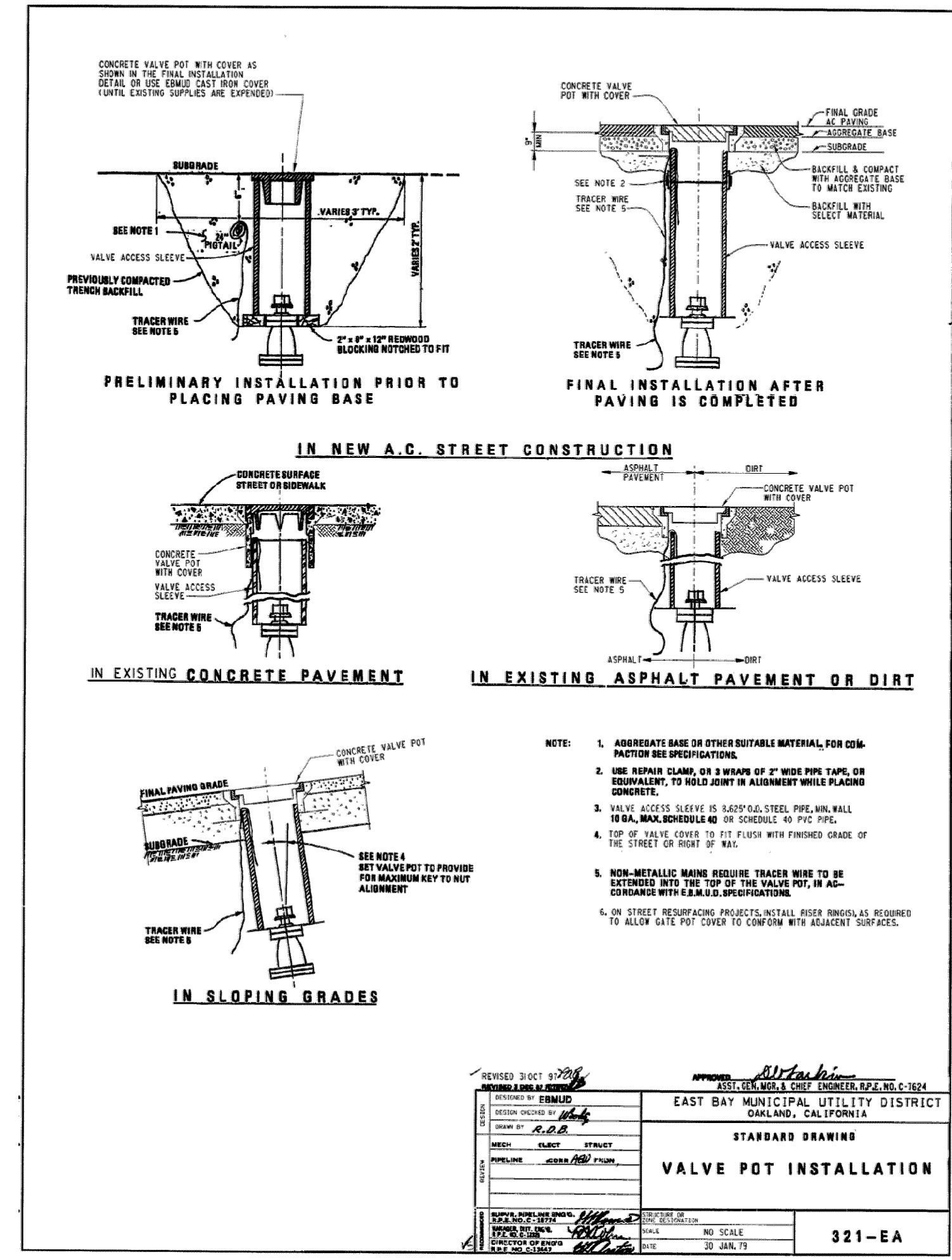
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APPROVED: <i>P. L. O.</i>		DATE: 7/6/16	DESIGN: HEI	DATE: 06/2016
MANAGER OF ENGINEERING		R.C.E. 66014	DRAWN: HEI	SCALE: N.T.S.
		CHECK: MS	BOOK:	PLAN: 8136
				FILE: 20B-155
				SHEET: 1 OF 2



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MANAGER OF ENGINEERING		R.C.E. 66014	DRAWN: HEI	SCALE: N.T.S.
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				FILE: 20B-155
				SHEET: 1 OF 2



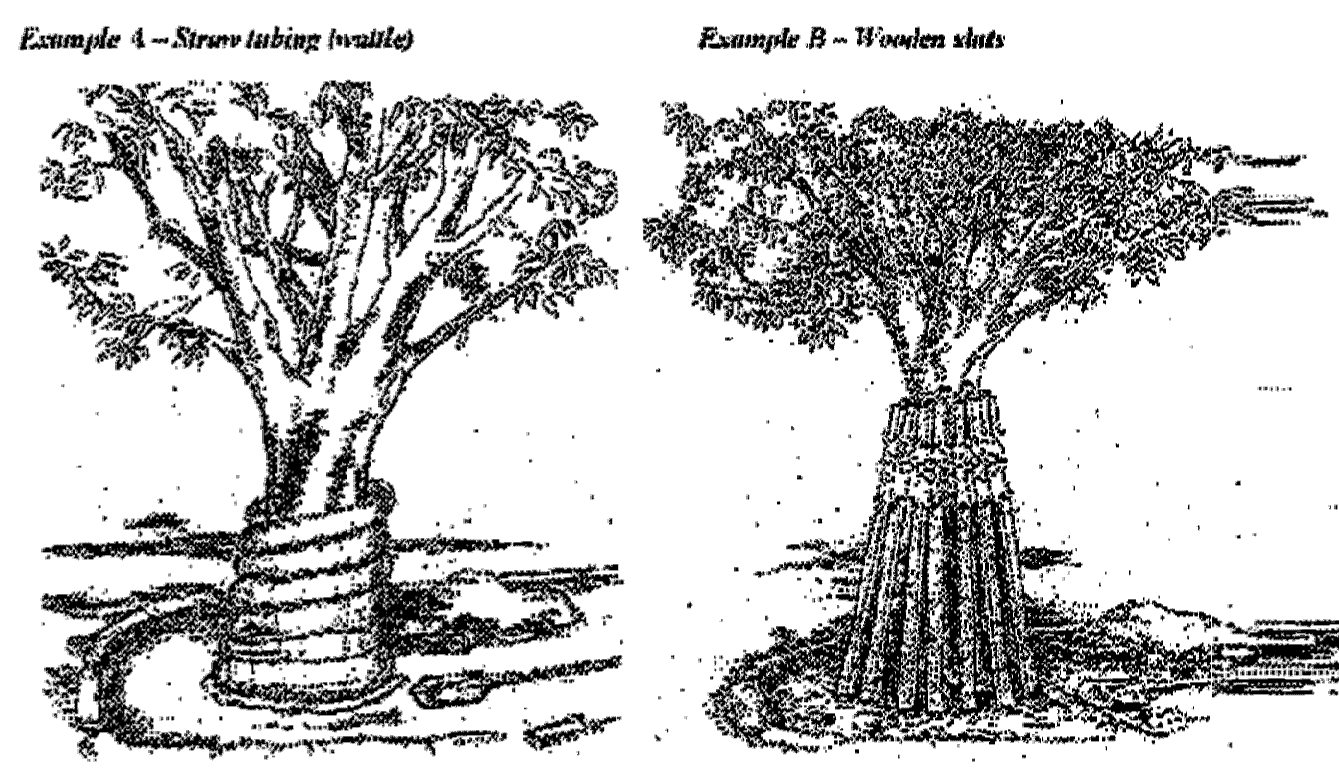
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APPROVED: <i>P. L. O.</i>		DATE: 7/6/16	DESIGN: HEI	DATE: 06/2016
MANAGER OF ENGINEERING		R.C.E. 66014	DRAWN: HEI	SCALE: N.T.S.
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				FILE: 20B-155
				SHEET: 2 OF 2



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MANAGER OF ENGINEERING		R.C.E. 66014	DRAWN: HEI	SCALE: N.T.S.
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				FILE: 20B-155
				SHEET: 1 OF 2

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		CHECK: MS	BOOK:	PLAN: 8136
				FILE: 20B-155
				SHEET: 1 OF 2

FIGURE 1: EXAMPLES OF TREE TRUNK PROTECTION. The following illustrations are examples of tree trunk protection measures. One of these examples shall be used when any approved construction activity takes place within the dripline of a protected tree that is not surrounded by protective fencing.



- Minimum Requirements:**
- Trees situated in a tree well or sidewalk planting strip shall have the trunk protected by wrapping it with straw tubes (wattle) or vertical wood slats (ex. 2x4), up to a minimum of 8 feet from grade.
 - Wooden slats shall be angled to protect the root flare at the base of the tree and bound securely on the outside.
 - Closed cell foam or an equivalent material shall be used to protect the trunk of the tree where it contacts the slats.
 - Lateral branches below 8 feet shall also be protected.
 - Contractor shall keep deleterious materials associated with project construction from contacting any part of the trees, or being placed or stored in the tree well or planting strip.

1 TREE PROTECTION DURING CONSTRUCTION
SCALE: NTS

TREE PROTECTION NOTES:

1. NO STREET TREE ROOTS ARE TO BE CUT WITHOUT APPROVAL OF CONTRACTOR'S LICENSED CERTIFIED ARBORIST.
2. ARBORIST: CONTRACTOR SHALL RETAIN A LICENSED CERTIFIED, CITY-APPROVED ARBORIST FOR "ON-CALL" CONSULTATION DURING CONSTRUCTION AS SPECIFIED IN THE SPECIAL PROVISIONS AND INDICATED ON THESE PLANS. NO EQUIPMENT SHALL BE PERMITTED ON-SITE UNTIL THE ARBORIST HAS APPROVED THE PROPOSED STAGING AREAS(S). NO TREE PRUNING, REMOVAL OR ROOT-CUTTING SHALL OCCUR WITHOUT THE ARBORIST'S DIRECTION, RECOMMENDATIONS OR APPROVAL.
3. TRENCHING: ALL TRENCHING WITHIN THE DRIP LINE OF EXISTING TREES SHALL BE BY HAND WITH CARE TAKEN NOT TO DAMAGE ROOTS OVER 2" DIAMETER.
4. ADVANCED WARNING: THE ARBORIST SHALL MARK LIMITS OF AREA WITHIN DRIP LINES IN ADVANCE PRIOR TO CONSTRUCTION.
5. PRUNING: TREES SHALL BE PRUNED ONLY AS RECOMMENDED BY THE ARBORIST AND APPROVED BY THE CITY. EXISTING TREES WITH BRANCHES ENCRoACHING TO 1' FROM BACK OF CURB AND LESS THAN 16" FROM FINISHED GRADE SHALL BE PRUNED UNDER THE DIRECTION OF A CITY APPROVED CERTIFIED ARBORIST.
6. CONSTRUCTION OPERATIONS: NO CONSTRUCTION OPERATIONS SHALL BE CARRIED ON WITHIN THE DRIP LINE AREA OF ANY TREE DESIGNATED TO BE SAVED EXCEPT AS AUTHORIZED BY THE ARBORIST.
7. STORAGE: THE AREA UNDER THE DRIP LINES OF THE TREE SHALL BE KEPT CLEAN. NO CONSTRUCTION MATERIALS AND NO CHEMICAL SOLVENTS SHALL BE STORED OR DUMPED UNDER A TREE.
8. TREE DAMAGE: ANY DAMAGE TO EXISTING TREE CROWNS OR ROOT SYSTEMS SHALL BE REPAIRED IMMEDIATELY BY AN APPROVED TREE SURGEON UNDER THE DIRECTION OF THE ARBORIST.
9. CONTRACTOR SHALL PERFORM DEMOLITION, CUT, CLEAN AND INSTALL GENERAL LANDSCAPE SOIL AT THE EXISTING TREES AS REQUIRED AND APPROVE BY THE CITY. CONTRACTOR'S ATTENTION IS DIRECTED TO THE CITY OF BERKELEY'S "GUIDELINES AND TREE PROTECTION REQUIREMENTS FOR DEVELOPMENT PROJECTS" (GUIDELINES) PROVIDED IN THE PROJECT SPECIAL PROVISIONS, OF WHICH FIGURE 1, SECTION III IS PROVIDED BELOW.



CSW | ST 2
CSW/Stuber-Stroeh Engineering Group, Inc.
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PROJECT MANAGER:	DATE:	DEPOSITION OF MONUMENTS:	DATE:
		SURVEY CHIEF OF PARTY:	DATE:
		WATERSHED REVIEW:	DATE:

CITY OF BERKELEY		STANDARD DETAIL	
DEPARTMENT OF PUBLIC WORKS		TRENCH EXCAVATION AND SURFACE RESTORATION	
SUBMITTED: <i>D. Z. Irby</i>	DATE: 7/6/16	SUBMITTED: <i>D. Z. Irby</i>	DATE: 7/6/16
SUPERVISING CIVIL ENGINEER	R.C.E. 64582	SUPERVISING CIVIL ENGINEER	R.C.E. 64582
APPROVED: <i>P. L. O.</i>	DATE: 7/6/16	APPROVED: <i>P. L. O.</i>	DATE: 7/6/16
MANAGER OF ENGINEERING	R.C.E. 66014	MANAGER OF ENGINEERING	R.C.E. 66014

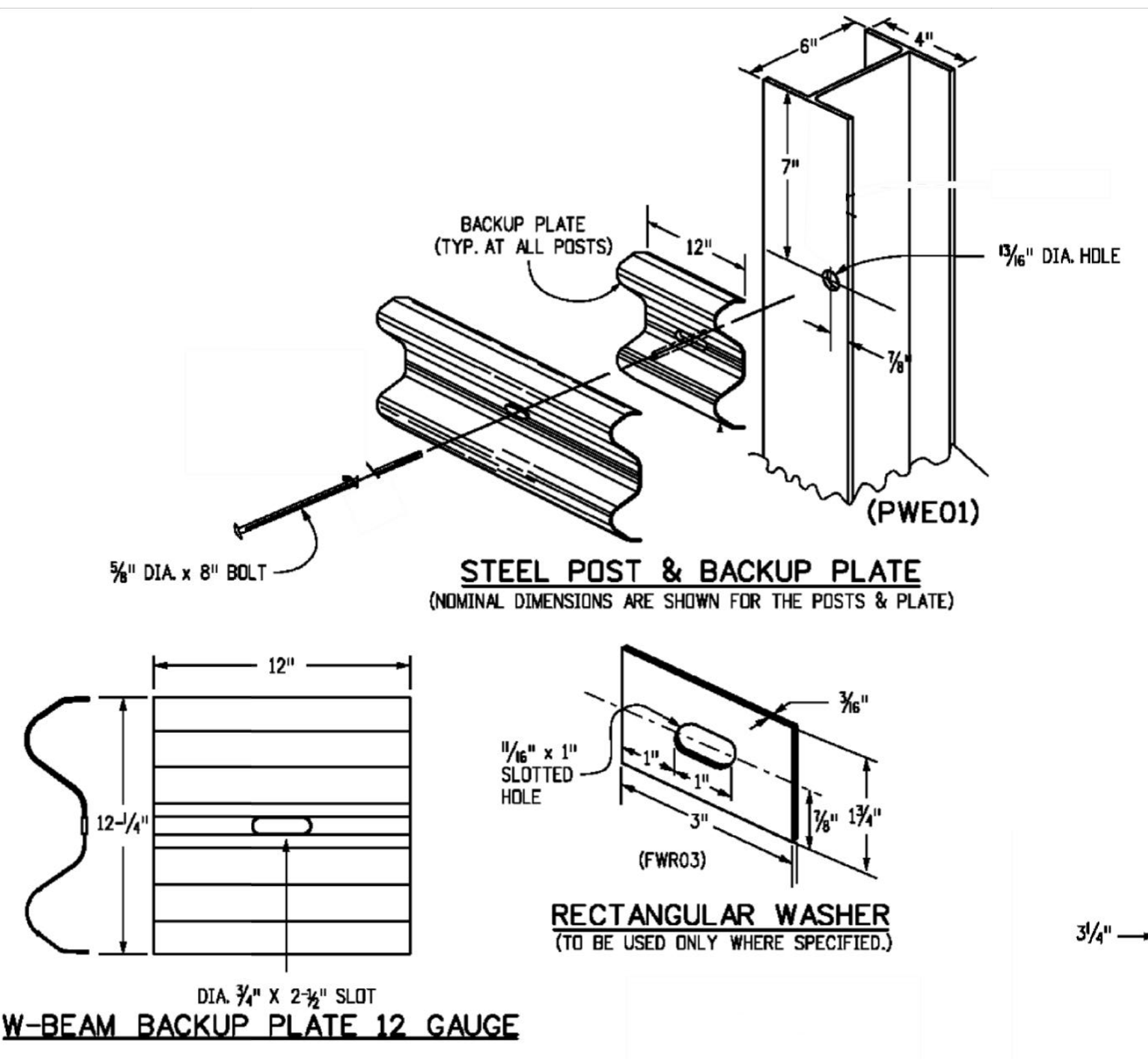
DESIGN: <u>JD</u>	HORIZ. AS NOTED
DRAWN: <u>DC</u>	VERT. <u>AS NOTED</u>
CHECK: <u>JD</u>	BOOK <u>AS BUILT</u>
DATE: <u>03/22/2024</u>	

CITY OF BERKELEY
 DEPARTMENT OF PUBLIC WORKS

FY 2023 RETAINING WALL AND STORM DRAIN IMPROVEMENT PROJECT
 CONSTRUCTION DETAILS

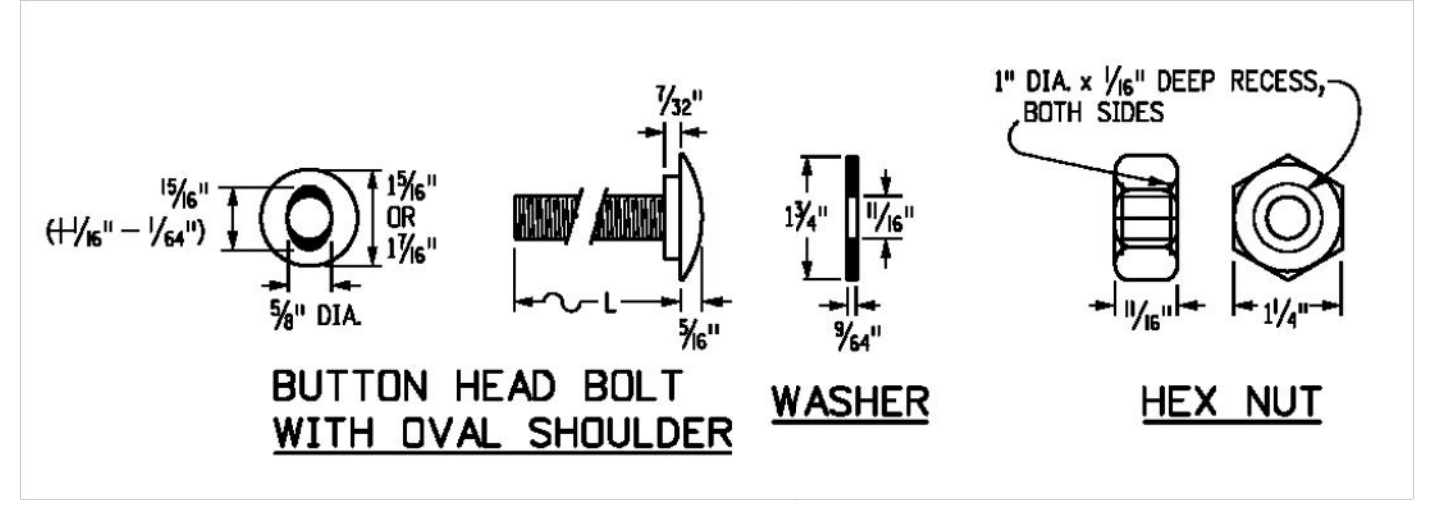
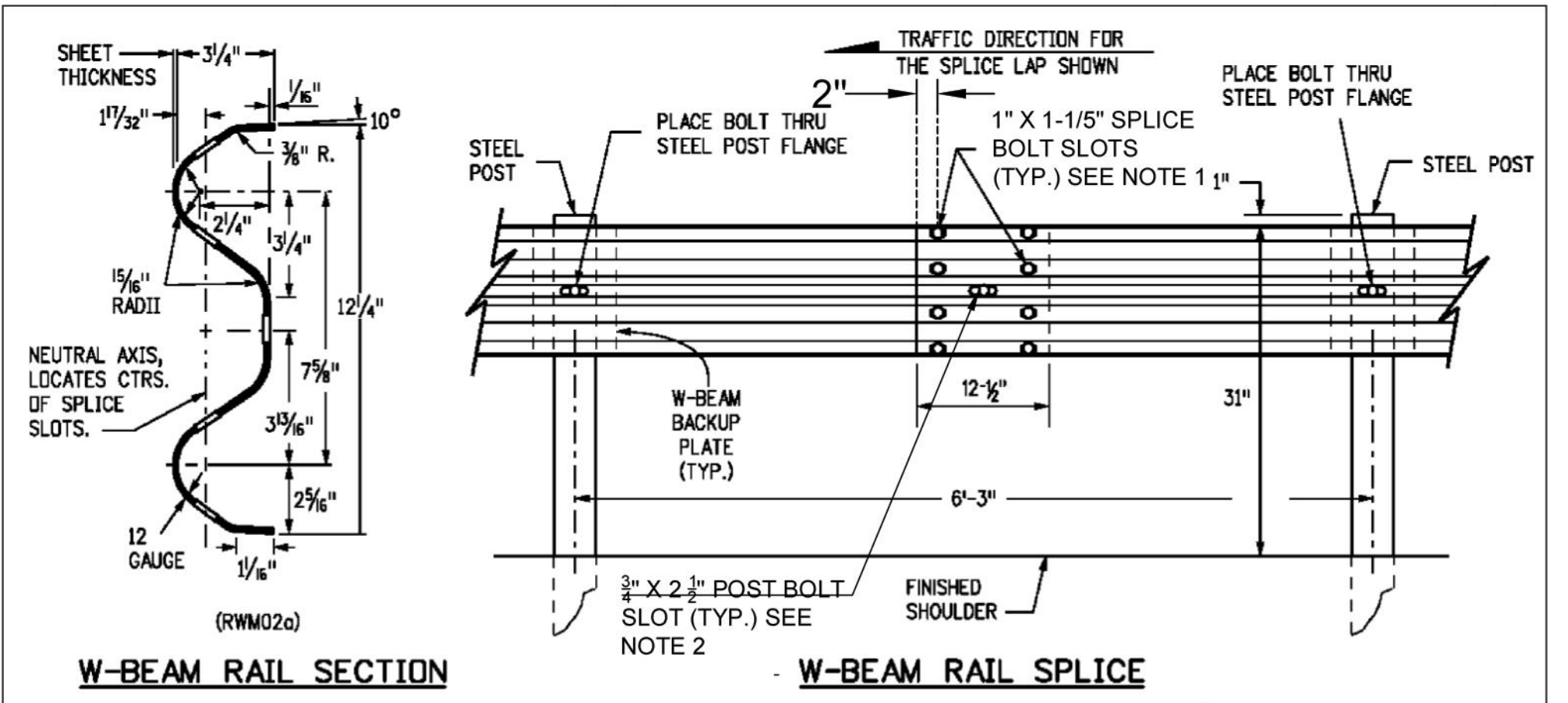
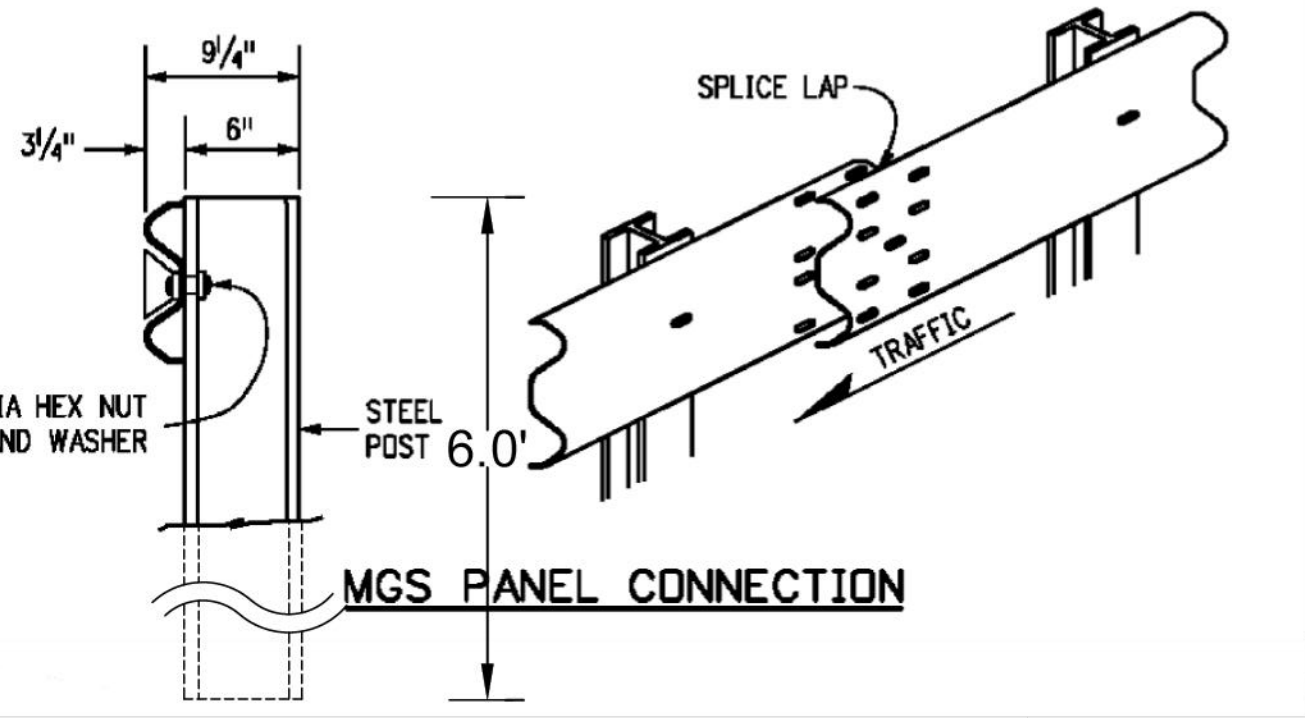
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REVISION	



RAILING AND POST CONNECTION DETAIL 1
SCALE: NTS

- NOTES:
1. THE MGS POSTS SPACING SHALL BE 6'-3" CENTER TO CENTER, EXCEPT AS OTHERWISE NOTED.
 2. TOLERANCE FOR TOP OF GUARDRAIL BEAM IS ± 1 IN.
 3. ALL W-BEAM SPLICES, AND SPLICES OF TERMINAL CONNECTORS TO W-BEAM SHALL BE LAPPED IN THE DIRECTION OF TRAFFIC UNLESS OTHERWISE NOTED IN THE PLANS OR BY THE MANUFACTURER.
 4. MATERIAL TYPE AND SHAPE OF POSTS SHALL BE THE SAME THROUGHOUT THE PROJECT EXCEPT WHEN SPECIFIC POSTS AND BLOCKS ARE SPECIFIED, i.e. AT END ANCHORAGES.
 5. AN ADDITIONAL HOLE SHALL BE PROVIDED IN THE POSTS TO FACILITAE FUTURE RAISING OF THE RAIL ELEMENTS AND BLOCKS FOR OVERLAYS.
 6. W-BEAM GUARDRAIL POSTS SHALL BE MANUFACTURED USING AASHTO M 270 (ASTM A 709) GRADE 36 STEEL UNLESS CORROSION RESISTANT STEEL IS REQUIRED, IN WHICH CASE THE POST SHALL BE MANUFACTURED FROM AASHTO M 270 (ASTM A 709) GRADE 50W STEEL. THE DIMENSIONS OF THE CROSS-SECTION SHALL CONFORM TO A W6 X 9 SECTION AS DEFINED IN AASHTO M 180 (ASTM A 6). W6 X 8.5 WIDE FLANGE STEEL POSTS ARE AN ACCEPTABLE ALTERNATIVE TO THE W6 X 9.
 7. AFTER THE SECTION IS CUT AND ALL HOLES ARE DRILLED OR PUNCHED THE COMPONENT SHALL BE ZINC-COATED CONFORMING TO AASHTO M 111 (ASTM A 123) UNLESS CORROSION-RESISTANT STEEL IS USED. WHEN CORROSION-RESISTANT STEEL IS USED THE PORTION OF THE POST TO BE EMBEDDED IN SOIL SHALL BE ZINC-COATED CONFORMING TO AASHTO M 111 (ASTM A 123) AND THE PORTION ABOVE THE SOIL SHALL NOT BE ZINC-COATED, PAINTED OR OTHERWISE TREATED.
 8. FIELD MODIFICATION TO RAIL ELEMENTS IS ALLOWED PER MANUFACTURER'S RECOMMENDATIONS, OR WITH THE APPROVAL OF THE STANDARDS AND SPECIFICATIONS UNIT. POSTS SHALL NOT BE MODIFIED. COMPONENTS ON WHICH THE SPLITER COATING HAS BEEN DAMAGED SHALL BE EITHER REGALVANIZED OR RECOATED IN CONFORMANCE WITH AASHTO M 36, OR PAINTED WITH ONE FULL BRUSH COAT OF ZINC RICH PAINT CONFORMING TO MILITARY SPECIFICATION DDD-P-21035A.



DIAMETER & TYPE (INCHES)	W/O BLOCKS L = LENGTH (INCHES)	THREAD LENGTH (INCHES)	INTENDED USE	AASHTO-ACC-ARTBA STANDARD NUMBER	NO. BOLTS, NUTS & WASHERS
5/8"		FULL (1 1/2)	ALL RAIL SPLICES	FBB01	8 PER SPLICE*
BUTTON HEAD OVAL SHLDR.	10		SINGLE POST (STEEL)		

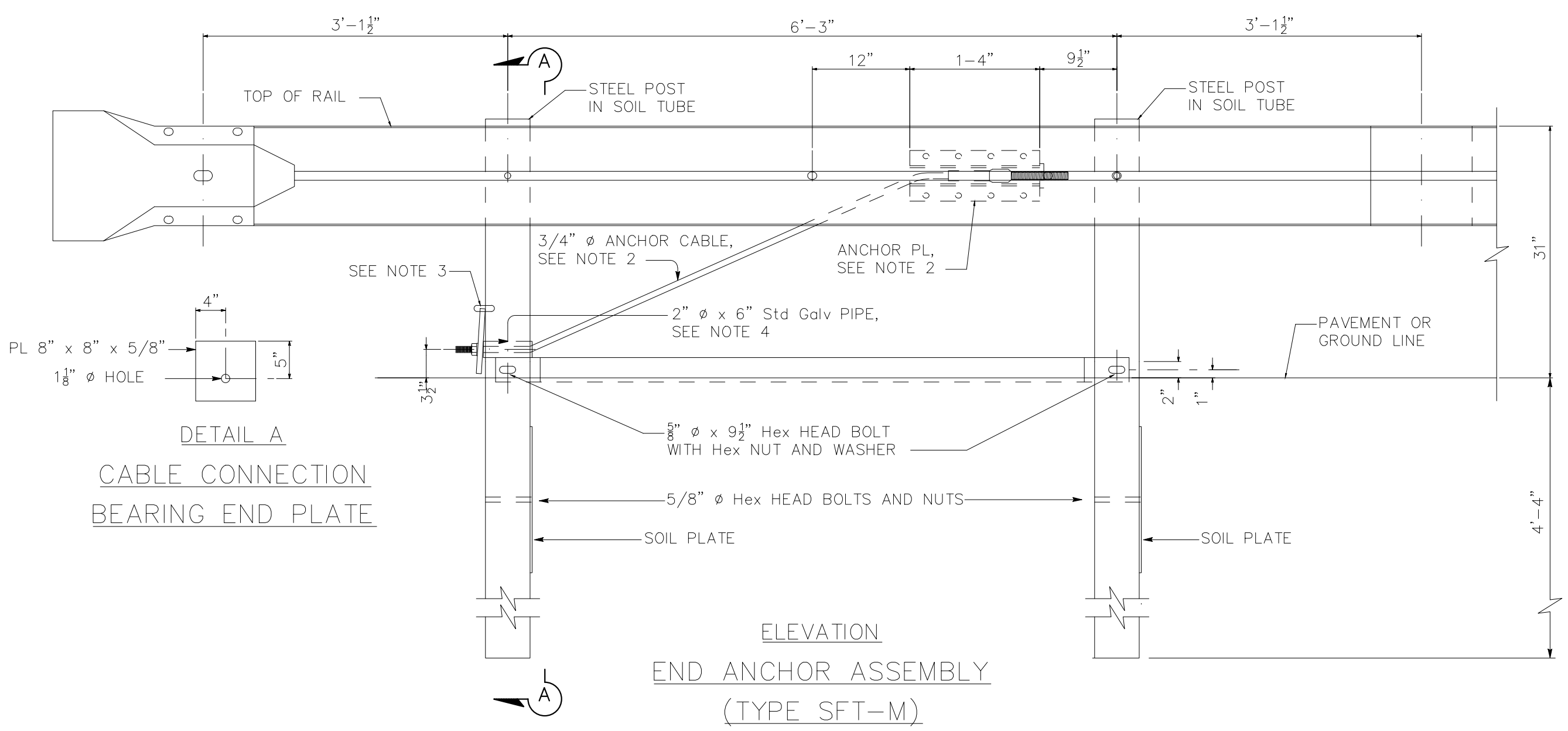
GUARDRAIL SPLICE & HARDWARE DETAIL 2
SCALE: NTS

- NOTES:
1. CONNECT THE OVERLAPPED END OF THE RAIL ELEMENTS WITH 3/8" Ø X 1 3/8" BUTTON HEAD OVAL SHOULDER SPLICE BOLTS INSERTED INTO THE 1" X 1-1/5" SLOTS AND BOLTED TOGETHER WITH HEX NUTS. RECESS OF HEX NUT POINTS TOWARDS RAIL ELEMENT. A TOTAL OF 8 BOLTS AND NUTS ARE TO BE USED AT EACH RAIL SPLICE CONNECTION.
 2. SLOTTED HOLES FOR BOLTED CONNECTION OF RAIL ELEMENT TO POST.
 3. WASHERS NOT USED AT RAIL SPLICES.

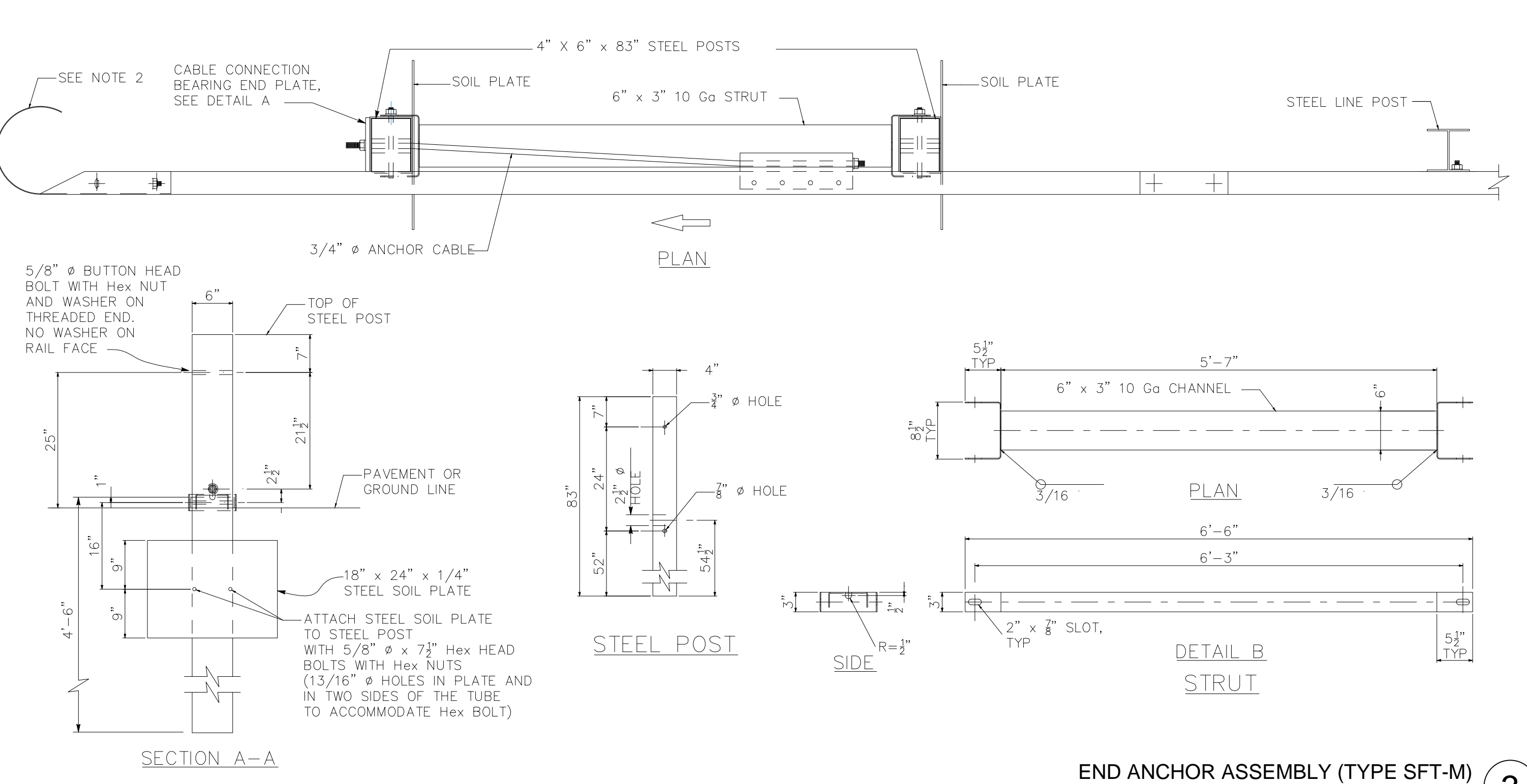
PART	MATERIAL SPEC.	GALVANIZING SPEC.	CORROSION-RESISTANT SPEC.
W-BEAM RAIL & TERMINAL SECTIONS	AASHTO M 180, CLASS A OR B	AASHTO M 180, TYPE 1 OR 2	AASHTO M 180, TYPE 4
BASE PLATE	ASTM A 36	AASHTO M 111	N.A.
NUTS, BOLTS & STUDS FOR GENERAL USE	ASTM A 307		
HIGH STRENGTH BOLTS & NUTS	ASTM A 325		AASHTO M 232, CLASS C
HIGH STRENGTH STUDS & NUTS	ASTM A 449		OR
ROUND STEEL WASHERS	ASTM F 436		ASTM B 695 CLASS 50 TYPE 1
RECTANGULAR WASHERS	AASHTO M 180		
OTHER FITTINGS	ASTM A 36	AASHTO M 111	

THE TABULATION OF GUARDRAIL WILL SPECIFY THE TYPE OF CORROSION PROTECTION: GALVANIZED OR CORROSION-RESISTANT STEEL.

STEEL POSTS SHALL HAVE THE SAME CORROSION PROTECTION AS SPECIFIED FOR THE METAL BEAM RAIL. PUNCHING, DRILLING, CUTTING, OR WELDING OF POSTS WILL NOT BE PERMITTED AFTER GALVANIZING.



- NOTES:
1. FOR DETAILS OF THE ANCHOR PLATE AND 3/4" CABLE, SEE STANDARD PLAN RSP A77S3.
 2. PLACE END CAP TYPE B WHEN PEDESTRIANS, BICYCLES OR TRAFFIC IS WITHIN CONTACT OF THE TRAILING END OF THE EXPOSED ELEMENT OR RAIL ELEMENT MAY BE CUT 1' PAST THE END OF THE POST. CLEAN, TREAT AND CUT OFF SHARP EDGES.
 3. SECURE END PLATE WITH TWO 16D NAILS TO MAINTAIN ALIGNMENT.
 4. 2" Ø STANDARD GALVANIZED PIPE OR 2 1/2" Ø GALVANIZED PIPE.



END ANCHOR ASSEMBLY (TYPE SFT-M) 3
SCALE: NTS



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PROJECT MANAGER: _____ DATE _____

DEPICTION OF MONUMENTS: _____ DATE _____

SURVEY CHIEF OF PARTY: _____ DATE _____

WATERSHED REVIEW: _____ DATE _____

FOR REDUCED PLANS - ORIGINAL SCALE IS IN INCHES

SUBMITTED: _____ DATE _____

SUPERVISING ENGINEER: _____ EXP. _____

APPROVED: _____ DATE _____

CITY ENGINEER: _____ EXP. _____

DESIGN: _____ JD _____

DRAWN: _____ DC _____

CHECK: _____ JD _____

AS BUILT: _____

HORIZ. AS NOTED: _____

VERT. _____

BOOK _____

DATE: 03/22/2024

CITY OF BERKELEY
DEPARTMENT OF PUBLIC WORKS

FY 2023 RETAINING WALL AND STORM DRAIN IMPROVEMENT PROJECT
CONSTRUCTION DETAILS

PLAN: 8278
FILE: 503-636
C2.2
SHEET 14 OF 21

APPROVAL	DESCRIPTION	DATE	MARK	REVISION

STRUCTURAL NOTES

GENERAL

1. THESE NOTES APPLY TO ALL DRAWINGS AND GOVERN UNLESS OTHERWISE NOTED OR SPECIFIED. ALL WORK SHALL BE IN CONFORMANCE WITH ALL APPLICABLE CODES AND ALL APPLICABLE LOCAL CODES AND ORDINANCES.

APPLICABLE CODES INCLUDE: THE 2022 EDITION OF:

- CALIFORNIA BUILDING CODE (CBC)
CALIFORNIA RESIDENTIAL CODE (CRC)
CALIFORNIA PLUMBING CODE (CPC)
CALIFORNIA ELECTRICAL CODE
CALIFORNIA MECHANICAL CODE (CMC)
CALIFORNIA GREEN BUILDING STANDARDS CODE
CALIFORNIA ENERGY CODE
CALIFORNIA FIRE CODE (CFC)

2. VERIFY ALL EXISTING CONDITIONS AND PROPOSED DIMENSIONS AT THE SUBJECT SITE. COMPARE STRUCTURAL DRAWINGS WITH ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS BEFORE COMMENCING WORK. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO COMMENCING ANY WORK. DO NOT PROCEED WITH CONSTRUCTION IF DISCREPANCIES ARE DETECTED UNTIL THEY ARE RESOLVED. DO NOT SCALE DRAWINGS.

3. UNLESS OTHERWISE SHOWN OR NOTED ALL TYPICAL DETAILS SHALL BE USED WHERE APPLICABLE. ALL DETAILS SHALL BE CONSIDERED TYPICAL AT SIMILAR CONDITIONS.

4. THE CONTRACTOR AND SPECIAL INSPECTOR ARE ENCOURAGED TO CONTACT THE ENGINEER REGARDING ANY QUESTIONS OF INTERPRETATION OF THESE SPECIFICATIONS AND DRAWINGS.

5. SAFETY MEASURES: AT ALL TIMES, THE CONTRACTOR SHALL WORK IN COMPLIANCE WITH CAL/OSHA-TITLE 8 SAFETY REGULATIONS AND SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR THE CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF PEOPLE AND PROPERTY, AND FOR ALL NECESSARY INDEPENDENT ENGINEERING REVIEWS OF THESE CONDITIONS.

6. SHORING AND BRACING OF THE SOIL, AND THE EXISTING AND NEW STRUCTURES SHALL BE INSTALLED WHERE NECESSARY TO ADEQUATELY SUPPORT THE IMPOSED VERTICAL AND LATERAL LOADS, AND SHALL BE MAINTAINED UNTIL THE NEW STRUCTURE CAN SUPPORT THE ANTICIPATED LOADS. THE ENGINEER'S JOB SITE VISITS ARE NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE TEMPORARY SHORING AND/OR CONTRACTOR'S SAFETY MEASURES.

7. ANY OPENING, HOLES, CUTS OR DISCONTINUITIES NOT SHOWN ON THE STRUCTURAL DRAWINGS AND EXTENDING INTO OR THROUGH STRUCTURAL ELEMENTS REQUIRE THE PRIOR APPROVAL OF THE ENGINEER.

8. SURFACE GRADES ADJACENT TO THE FOUNDATION SHALL SLOPE AWAY FROM BUILDING AT A MIN OF 5% FOR PERVIOUS SURFACES OR 2% FOR IMPERVIOUS SURFACES FOR MIN 10 FEET.

SPECIAL INSPECTIONS AND CONSTRUCTION OBSERVATIONS

1. TESTS AND SPECIAL INSPECTIONS SHALL BE PROVIDED PER REQUIREMENTS OF THE 2022 CALIFORNIA BUILDING CODE CHAPTER 17.

2. THE FOLLOWING ITEMS SHALL BE INSPECTED AND/OR TESTED BY DAC ASSOCIATES INC. OR A TESTING LAB IN ACCORDANCE WITH CHAPTER 17 OF THE 2022 CALIFORNIA BUILDING CODE. THE CONTRACTOR SHALL NOTIFY THE INSPECTOR AT LEAST 72 HOURS PRIOR TO TIME OF INSPECTION.
a. FOR CONCRETE WITH STRENGTH EQUAL OR MORE THAN 3,000PSI, PLACEMENT, SAMPLING & TESTING FOR STRENGTH (EXCEPT FOR CONTINUOUS FOOTING & SLAB-ON-GRADE)
b. EPOXY ADHESIVE DOWEL INTO (E) CONCRETE

3. THE FOLLOWING ITEMS SHALL BE OBSERVED BY THE ENGINEER OF RECORD (DAC ASSOCIATES, INC.). THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 72 HOURS PRIOR TO TIME OF INSPECTION.
a. FOUNDATION, PAVEMENT, AND SLAB-ON-GRADE SUBGRADES
b. PLACEMENT OF REINFORCING STEEL AND CAST-IN-PLACE ANCHORAGES
c. SOIL ENGINEER TO OBSERVE AND APPROVE IN WRITING PLACEMENT OF GEOTECHNICAL DRAINAGE
d. SOIL ENGINEER TO OBSERVE AND APPROVE IN WRITING BACKFILL OPERATIONS

4. FOUNDATION EXCAVATIONS AND DRILLED PIERS AND SLAB-ON-GRADE SUBGRADES SHALL BE OBSERVED AND APPROVED IN WRITING BY THE SOIL ENGINEER (DAC ASSOCIATES, INC.) PRIOR TO PLACEMENT OF FORMS OR REINFORCING STEEL. THE CONTRACTOR SHALL NOTIFY THE SOIL ENGINEER AT LEAST 72 HOURS BEFORE EXCAVATION/DRILLING IS SCHEDULED TO BEGIN.

5. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL INSPECTIONS AND ENSURING THAT ALL REQUIRED TESTING & INSPECTION IS PERFORMED TO THE SATISFACTION OF THE INSPECTOR.

DESIGN BASIS AND CRITERIA

1. DESIGN CONFORMS TO THE 2022 CBC AND ALL APPLICABLE LOCAL ORDINANCES.

2. DESIGN VERTICAL LOAD DL (PSF) LL (PSF)
a. NOT APPLICABLE -- --

3. DESIGN LATERAL LOAD

- a. WIND: 92 MPH BASIC WIND SPEED. EXPOSURE C
b. SEISMIC: RISK CATEGORY II, SEISMIC DESIGN CATEGORY D, Ss = 2.375g S1 = 0.909g, Sps=1.583g, Sp=NULL R=6.5, I=1.0, Cs = Sps/(R/I), BASE SHEAR, V = Cs*W

4. ALL STRUCTURES SHOWN ON THESE DRAWINGS ARE BASED UPON CIVIL PLANS TITLED "CITY OF BERKELEY, DEPARTMENT OF PUBLIC WORKS, ENGINEERING CONSULTATION SERVICES," PREPARED BY CSW/STUBER-STROEH GROUP, INC., DATED MAY 5, 2023.

CONCRETE

1. CONCRETE CEMENT SHALL CONFORM TO THE LATEST ASTM C-150 & C-595, AND SHALL BE TYPE II, TYPE I CEMENT MAY BE USED IN AREAS NOT IN CONTACT WITH EARTH. MINIMUM 6 SAKCS/CU.YD. OF CEMENT. FLY ASH SHALL NOT COMPOSE MORE THAN 25% OF THE CEMENTITIOUS MATERIAL. AGGREGATE SHALL BE FREE OF ALKALI REACTIVITY.

2. WATER/CEMENT RATIO SHALL NOT EXCEED 0.45. ACID SOLUBLE CHLORIDE-FREE ADMIXTURES AND PLASTICIZERS FOR WORKABILITY MAY BE USED IF APPROVED BY THE TESTING LABORATORY AND ENGINEER. BECAUSE EXCESS WATER REDUCES CONCRETE STRENGTH, ADDING WATER AT THE SITE IS DISCOURAGED AND SHALL NOT EXCEED ONE GALLON PER CUBIC YARD.

3. REINFORCE ALL STRUCTURAL CONCRETE. CONCRETE CONSTRUCTION TOLERANCES SHALL COMPLY WITH ACI 117. INSTALL ALL INSERTS, BOLTS, ANCHORS, AND REINFORCING BARS AND SECURELY TIE PRIOR TO PLACING CONCRETE.

4. CONCRETE SHALL BE AS FOLLOWS (UNLESS OTHERWISE NOTED):

Table with 4 columns: LOCATION, 28 DAYS STRENGTH, SLUMP, AGGREGATE (ASTM C33). Rows include SLAB-ON-GRADE, CONCRETE WALL, and DRILLED PIERS.

NOTE: STRUCTURAL DESIGN OF CONTINUOUS FOOTING AND SLAB-ON-GRADE CONCRETE BASED ON 2,500 PSI COMPRESSIVE STRENGTH. THE SPECIFIED STRENGTH ABOVE ARE USED FOR BETTER QUALITY PER CRITERIA ONLY. CONCRETE SPECIAL INSPECTION FOR CONTINUOUS FOOTING AND SLAB-ON-GRADE IS NOT REQUIRED.

5. CONCRETE SHALL BE PLACED IN A CONTINUOUS OPERATION BETWEEN PREDETERMINED AND PREAPPROVED CONSTRUCTION JOINTS.

6. CONCRETE SHALL BE CONTINUOUSLY CURED FOR 7 DAYS AFTER PLACEMENT IN ANY APPROVED MANNER. FOOTINGS ARE EXCEPTED FROM THIS REQUIREMENT.

7. CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW AND APPROVAL, DRAWINGS LOCATING AND DETAILING ALL PROPOSED CONSTRUCTION/CONTROL JOINTS IN CONCRETE PRIOR TO COMMENCING WORK. CONSTRUCTION JOINT SHALL BE ROUGHENED, EXPOSING CLEAN AGGREGATE TO 1/2" DEPTH SOLIDLY EMBEDDED IN MORTAR MATRIX, AND SHALL INCLUDE SHEAR KEYS AND DOWELS AS REQUIRED BY THE ENGINEER.

8. THE LOCATION AND PROTECTION OF EXISTING UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF UTILITY PIPES RUN THROUGH, OR WITHIN 24" BELOW, ANY NEW CONCRETE CONSTRUCTION. THE ENGINEER WILL PROVIDE THE CONTRACTOR WITH DESIGN DETAILS UNDER SUCH CIRCUMSTANCES.

9. PATCHING OF CONCRETE: ALL INSERTS HOLES, AND OTHER IMPERFECTIONS ON THE SURFACE OF THE CONCRETE SHALL BE FILLED WITH GROUT, BRUSHED, AND SACKED TO A UNIFORM FINISH. ALL HOLES THROUGH TO THE OUTSIDE OF THE BUILDING MUST BE MADE WATERTIGHT.

10. CHAMFER ALL CORNERS 3/8", EXCEPT TOP EDGES OF SLABS AND BEAMS, UNLESS OTHERWISE NOTED.

11. ALL CONCRETE SHALL BE PLACED ON COMPETENT SUBGRADE, AS DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

12. CONCRETE FLOOR SLAB-ON-GRADE SHALL HAVE A MINIMUM THICKNESS OF 4" UNLESS OTHERWISE NOTED.

13. ALL SLAB-ON-GRADE SHALL HAVE CONTROL JOINTS (WEAKENED PLANE JOINT) PER TYPICAL DETAIL TO CREATE APPROXIMATELY 20-FOOT SQUARES, UNLESS OTHERWISE NOTED ON PLANS.

REINFORCING STEEL

1. ALL REINFORCING STEEL BARS SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR DEFORMED BILLET-STEEL CONCRETE REINFORCEMENT, ASTM A615 GRADE 60 KSI EXCEPT FOR GRADE 40 KSI FOR #3 STIRRUP/TIE, UNLESS OTHERWISE NOTED.

2. LAP SLICE ALL BARS A MINIMUM OF 36 BAR DIA OR 18" MIN, (UNLESS OTHERWISE NOTED) LAP HORIZ REBAR AT CORNERS AND INTERSECTIONS IN FOOTINGS AND WALLS WITH CORNER BARS OR OTHER METHODS SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER.

3. WIRE MESH SHALL CONFIRM WITH ASTM A185-64.

4. UNLESS OTHERWISE NOTED, MAINTAIN COVERAGE TO FACE OF REINFORCING BARS AS FOLLOWS:

Table with 2 columns: LOCATION, MINIMUM CLEAR COVER. Rows include CAST AGAINST EARTH, EXPOSED TO EARTH OR WEATHER, EXTERIOR SURFACES FOR BEAMS & COLUMN.

FOUNDATIONS AND RETAINING WALLS

1. THE FOUNDATION AND RETAINING WALLS DESIGN FOR HILGARD AVENUE IS BASED ON RECOMMENDATIONS OF THE GEOTECHNICAL INVESTIGATION REPORT TITLED "GEOTECHNICAL INVESTIGATION REPORT, HILGARD AVENUE RETAINING WALL," PREPARED BY DAC ASSOCIATES, INC., DATED 04-07-2023. A COPY OF THE REPORT SHALL BE OBTAINED FROM THE SOIL ENGINEER'S OFFICE. THE REPORT IS PART OF THE CONSTRUCTION DOCUMENTS, AND ITS RECOMMENDATIONS ARE TO BE FOLLOWED DURING CONSTRUCTION.

THE FOUNDATION AND RETAINING WALLS DESIGN FOR QUEENS ROAD IS BASED ON RECOMMENDATIONS OF THE GEOTECHNICAL INVESTIGATION REPORT TITLED "PRELIMINARY GEOTECHNICAL INVESTIGATION REPORT, QUEENS ROAD CONCRETE STAIRS," PREPARED BY DAC ASSOCIATES, INC., DATED 04-07-2023. A COPY OF THE REPORT SHALL BE OBTAINED FROM THE SOIL ENGINEER'S OFFICE. THE REPORT IS PART OF THE CONSTRUCTION DOCUMENTS, AND ITS RECOMMENDATIONS ARE TO BE FOLLOWED DURING CONSTRUCTION.

2. DESIGN CRITERIA FOR HILGARD AVENUE
a. ASSUMED DEPTH TO COMPETENT SUBGRADE = 8.0 FEET
b. SKIN FRICTION BETWEEN CONCRETE PIER AND COMPETENT BEDROCK = 1000 PSF IN COMPRESSION, 800 PSF IN TENSION
d. COEFFICIENT OF FRICTION = 0.3
e. CREEP PRESSURE = 65 PCF FOR 2 FEET (EQUIVALENT FLUID PRESSURE)
f. ALLOWABLE PASSIVE PRESSURE IN COMPETENT SUBGRADE = 450 PCF (EQUIVALENT FLUID PRESSURE) APPLIED AGAINST 2 PIER DIAMETERS OR AGAINST VERTICAL FACE OF FOOTINGS, ASSUMED LEVEL BACKFILL (ADD 10 PCF FOR EVERY 1 DEGREE OF SLOPE)

DESIGN CRITERIA FOR QUEENS ROAD
a. ASSUMED DEPTH TO COMPETENT SUBGRADE = 1.0 FOOT
b. ALLOWABLE BEARING PRESSURE (DL+LL) = 4000 PSF FOR FOOTING
c. ACTIVE SOIL PRESSURE = 40 PCF FOR LEVEL BACKFILL (ADD 1 PCF FOR EVERY 2 DEGREES OF SLOPE)

3. ALL FOUNDATION AND RETAINING WALL WORK SHALL COMPLY WITH 2022 CBC CHAPTER 18.

4. WATERPROOF MEMBRANE SHALL BE 10MIL MIN THICK; 2" MIN OVERLAP & SECURED W/ TAPE AT ALL EDGES PER MANUFACTURE'S RECOMMENDATION.

5. CONTRACTOR SHALL USE APPROVED DEVICES AND/OR SERVICES TO SCAN FOR UNDERGROUND UTILITIES PRIOR TO START OF EXCAVATION OR GRADING.

6. CONTRACTOR SHALL AVOID EXCAVATION BELOW BOTTOM OF FOOTING AND REMOVING ANY SOIL WHICH MAY SERVE FOR LATERAL RESISTANCE FOR ADJACENT FOOTINGS. UNLESS OTHERWISE NOTED.

7. EXTERIOR FOOTINGS TO BE A MINIMUM OF 18" BELOW FINISHED GRADE (UNLESS OTHERWISE NOTED) BEARING ON NATIVE UNDISTURBED COMPETENT SOIL OR ENGINEERED COMPACTED FILLS WITH 95% RELATIVE COMPACTION (ASTM D1557), APPROVED BY SOIL ENGINEER IN WRITING.

8. DO NOT ALLOW WATER TO STAND IN EXCAVATED HOLES. IF BOTTOMS OF HOLE BECOME SOFTENED DUE TO RAIN OR OTHER WATER BEFORE CONCRETE IS CAST, EXCAVATE SOFTENED MATERIAL AND REPLACE WITH PROPERLY COMPACTED BACKFILL OR CONCRETE AT NO COST TO THE OWNER.

EQUIPMENT, PIPE, AND DUCT SUPPORT

1. THE CONTRACTOR IS RESPONSIBLE FOR THE VERTICAL AND LATERAL SUPPORT OF ALL HVAC AND OTHER EQUIPMENT. SHOP DRAWINGS SHALL BE SUBMITTED FOR THE SUPPORT OF ALL HVAC EQUIPMENT OVER 400 POUNDS, STAMPED AND SIGNED BY A CALIFORNIA-LICENSED CIVIL OR STRUCTURAL ENGINEER. EQUIPMENT AND ANCHORAGE SHALL BE DESIGNED TO RESIST LATERAL SEISMIC FORCES PER 2022 CBC SECTION 1632.2. LATERAL SEISMIC DESIGN FORCES ON ALL LIFE SAFETY EQUIPMENT SHALL BE INCREASED BY A FACTOR OF 1.50.

2. CONDUITS, PIPES AND DUCTS SHALL BE BRACED TO RESIST SEISMIC HAZARD B PER THE CURRENT EDITION OF "SMACNA SEISMIC RESTRAINT MANUAL: GUIDELINES FOR MECHANICAL SYSTEMS", EXCEPT THAT THE COMPONENTS OF LIFE SAFETY SYSTEMS SHALL BE BRACED TO RESIST SEISMIC HAZARD LEVEL A.

ADHESIVE ANCHOR

1. INSTALLATION OF ADHESIVE, ANCHORS AND DOWELS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND THESE NOTES. WHERE REQUIREMENTS OF THE MANUFACTURER OR THESE NOTES CONFLICT THE MORE RESTRICTIVE PROVISIONS GOVERN.

2. ADHESIVE SYSTEMS
A. THE FOLLOWING ADHESIVE ANCHOR SYSTEMS ARE ACCEPTABLE FOR USE IN CONCRETE:
SIMPSON STRONG-TIE CO. INC.: SET-XP (ESR-2508)
HILTI, INC.: HILTI HIT HY-200

3. ADHESIVE CONNECTIONS SHALL HAVE SPECIAL INSPECTION PER CBC SECTION 1704 UNLESS OTHERWISE NOTED.

MONITORING FOR EVALUATION OF CONSTRUCTION ACTIVITY IMPACT ON ADJACENT PROPERTIES

1. G.C. TO HAVE INSPECTOR PERFORM THOROUGH INSPECTION OF PROPERTIES IN THE ZONE OF INFLUENCE OF CONSTRUCTION (50'-RADIUS FROM EXTENTS OF CONSTRUCTION).

2. INSPECTOR TO INSTALL FIXED AND SECURE MARKERS ON THE EXISTING FOUNDATIONS OF NEIGHBORING PROPERTIES.

3. INSPECTOR TO TAKE DATED AND TIMED PHOTOS OF EXISTING CONDITIONS AT THE FOUNDATIONS OF NEIGHBORING PROPERTIES.

4. INSPECTOR TO PERFORM PRECISION 3D SURVEY OF THE MARKERS PRIOR TO START OF CONSTRUCTION.

5. INSPECTOR TO PERFORM PRECISION 3D SURVEY OF THE MARKERS ON WEEKLY BASIS TO COMPARE WITH EXISTING CONDITIONS.

6. INSPECTOR TO PERFORM PRECISION 3D SURVEY OF THE MARKERS AT THE END OF CONSTRUCTION.

7. INSPECTOR TO PERFORM PRECISION 3D SURVEY OF THE MARKERS ONE MONTH, 3 MONTHS, 6 MONTH, AND ONE YEAR AFTER END OF CONSTRUCTION.

ABBREVIATIONS

Table with 2 columns: ABBREVIATIONS, DESCRIPTION. Includes symbols for angles, joints, materials (ACI, AISC, AS, ASTM, AWS, AB, ABV, ADD'L, AGGR, ALT, APPROX, ARCH, ATR), and structural elements (DBL, DBLR, DET, DF, DN, DIA, #, DIAG, DIM, DL, DWG, EA, EF, EL, EMBED, EN, ENGR, EQ, EW, EXT, FDN, FF, FG, FL, FLR, FN, FTG, GA, GALV, GB, HD, HGR, HORI, HR, HT).

Table with 3 columns: DATE, MARK, REVISION. Includes a vertical stamp: 100% CONSTRUCTION DOCUMENTS, 9/22/2023, APPROVAL.



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PROJECT MANAGER: DATE DEPICTION OF MONUMENTS: DATE SURVEY CHIEF OF PARTY: DATE WATERSHED REVIEW: DATE

SUBMITTED: DATE REGISTR. EXP. SUPERVISING ENGINEER: DATE R.C.E. EXP. APPROVED: DATE CITY ENGINEER: DATE

DESIGN: DA DRAWN: DL CHECK: DA AS BUILT: DATE: 03/08/2024

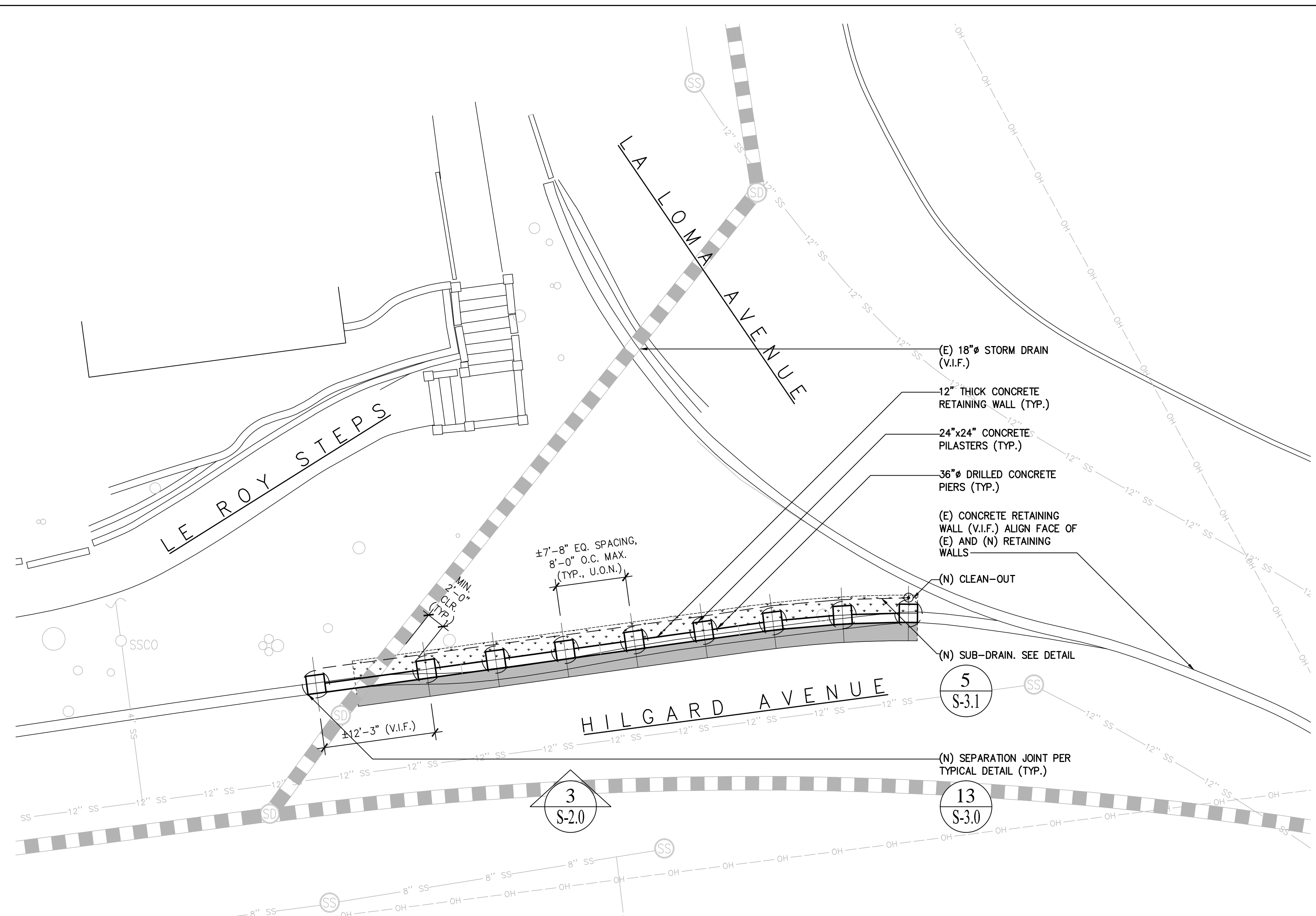
CITY OF BERKELEY DEPARTMENT OF PUBLIC WORKS

FY 2023 RETAINING WALL AND STORM DRAIN IMPROVEMENT PROJECT S-1.0 STRUCTURAL GENERAL NOTES

PLAN: 8278 FILE: 503-636 S-1.0 SHEET 15 OF 21

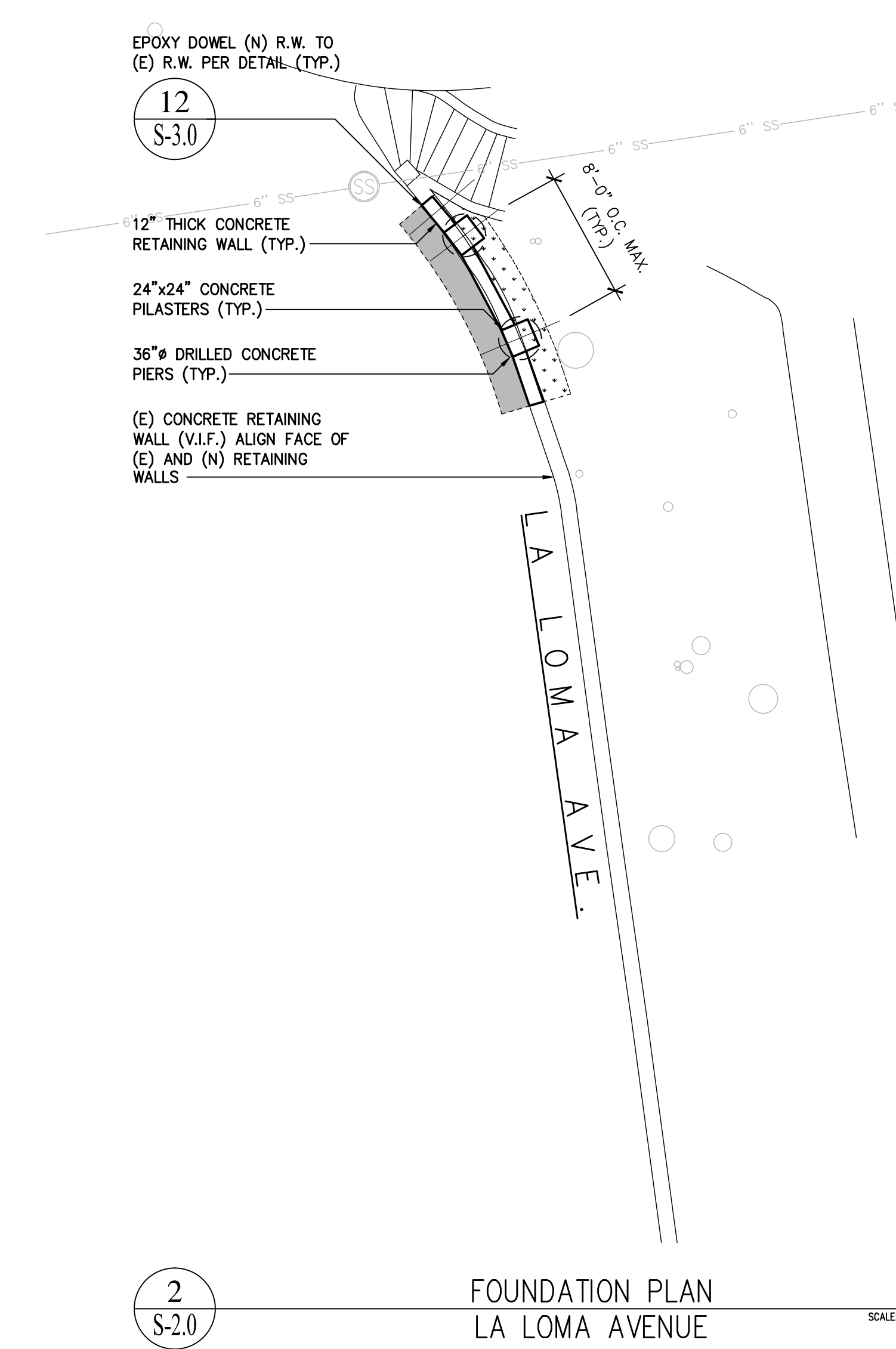
PLAN LEGEND

- (N) 24" SQUARE PILASTER ON 36" DIA. DRILLED CONCRETE PIER. SEE DETAIL
- 2
- S-3.1



1 FOUNDATION PLAN LA LOMA AVENUE @ LE ROY STEPS SCALE: 1/8" = 1'-0"

3 ELEVATION LA LOMA AVENUE @ LE ROY STEPS SCALE: 1/8" = 1'-0"



- REPLACED RETAINING WALL PER PLAN. SEE CIVIL DRAWINGS FOR MORE INFORMATION.
- LINE OF GRADE, BEYOND. SEE CIVIL DRAWINGS FOR MORE INFORMATION.
- 24"x24" CONCRETE PILASTERS PER PLAN, BEYOND (TYP.)
- SEPARATION JOINT PER TYPICAL DETAIL (TYP.)
- (E) RETAINING WALL PER PLAN (V.I.F.). SEE CIVIL DRAWINGS FOR MORE INFORMATION.
- (E) GRADE (V.I.F.). SEE CIVIL DRAWINGS FOR MORE INFORMATION.
- (E) RETAINING WALL PER PLAN (V.I.F.). SEE CIVIL DRAWINGS FOR MORE INFORMATION.



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 AS BUILT: _____

HORIZ. _____
 VERT. _____
 BOOK _____
 DATE: 03/08/2024

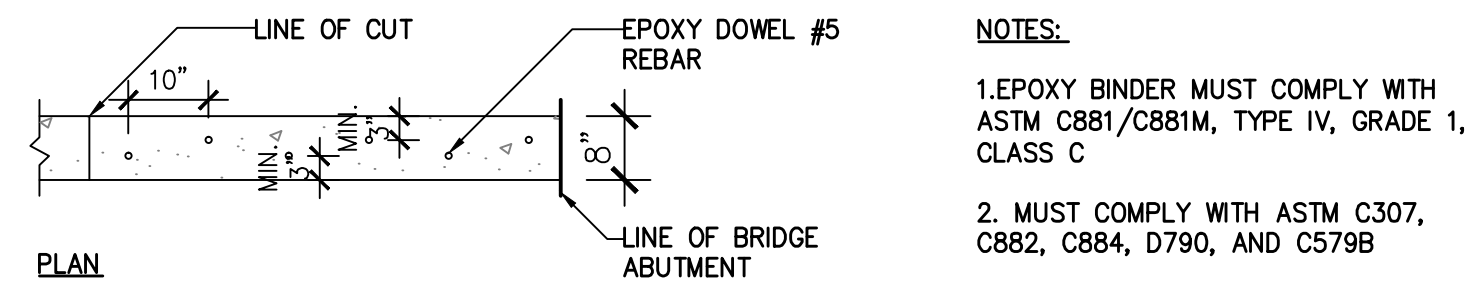
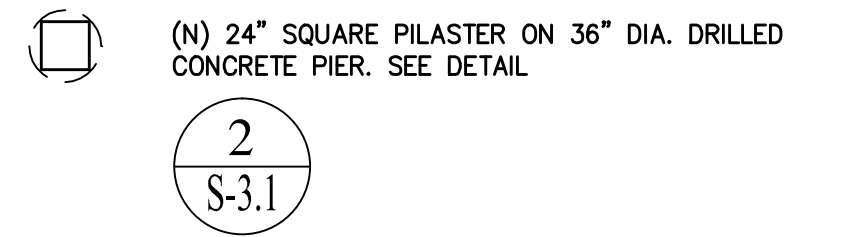
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FY 2023 RETAINING WALL AND STORM DRAIN IMPROVEMENT PROJECT
 S-2.0 STRUCTURAL PLANS
 HILGARD AVENUE AND LA LOMA AVENUE RETAINING WALL

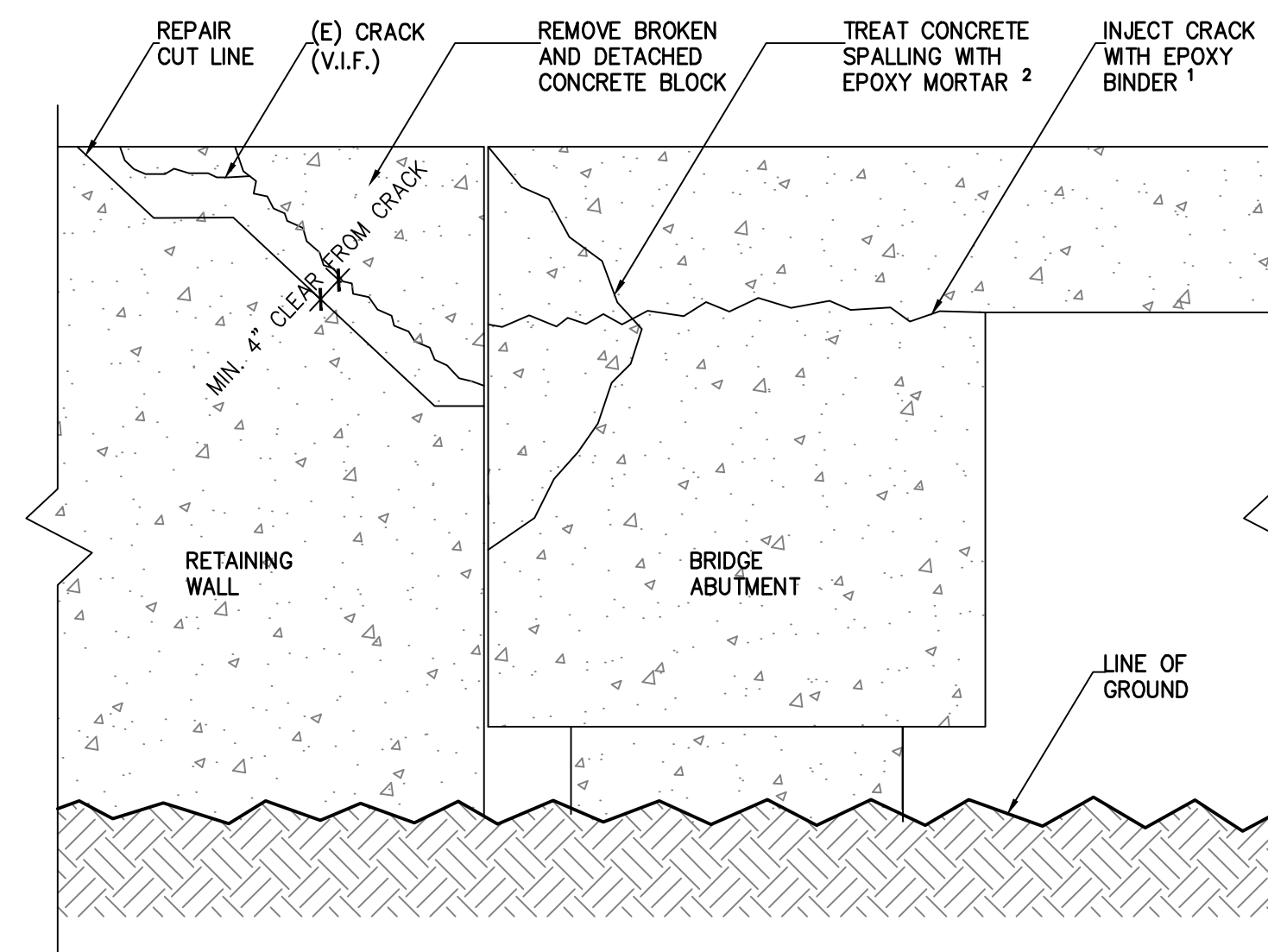
PLAN: 8278
 FILE: 503-636
 S-2.0
 SHEET 16 OF 21

REVISION	MARK	DATE	DESCRIPTION	APPROVAL

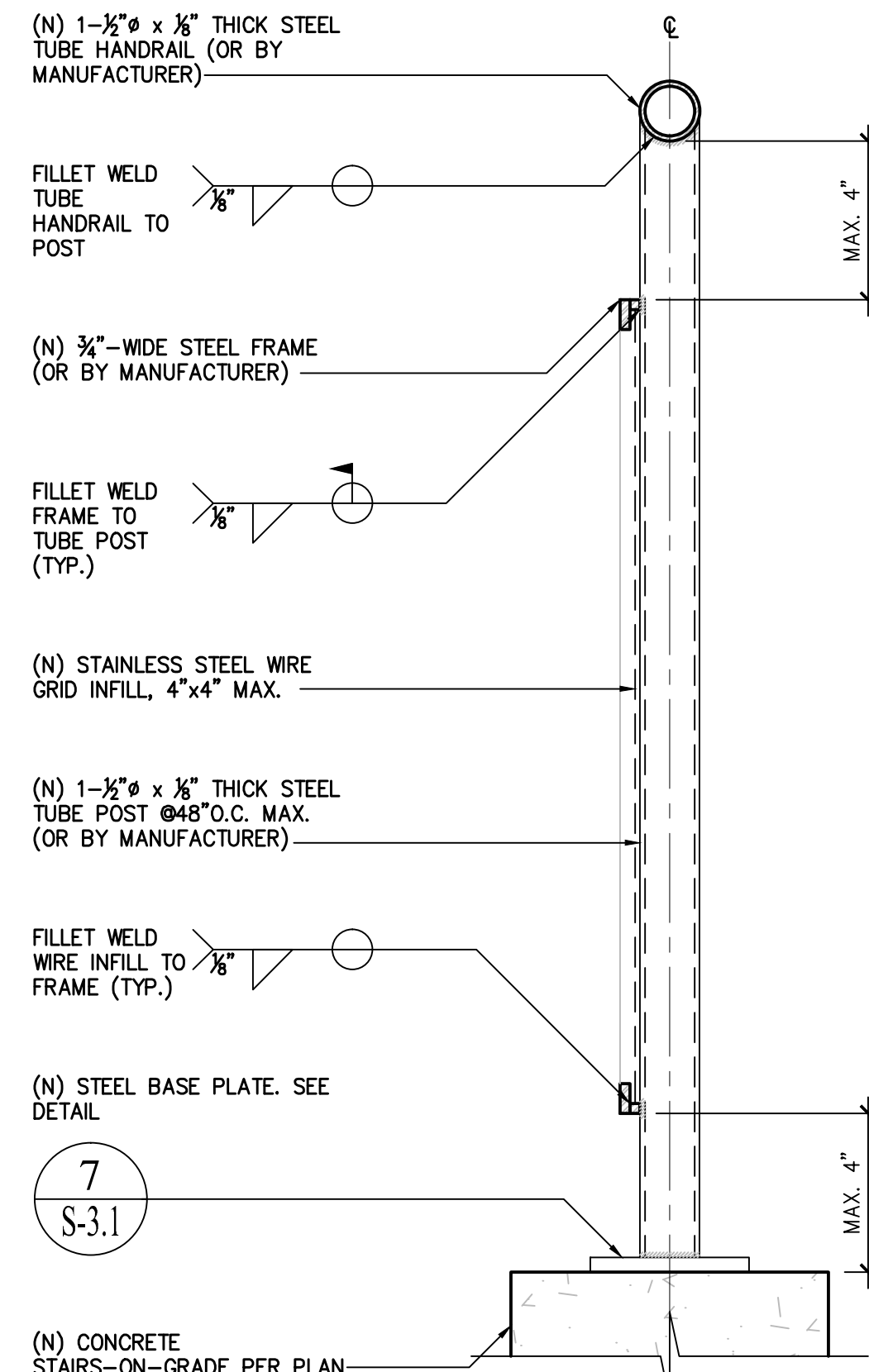
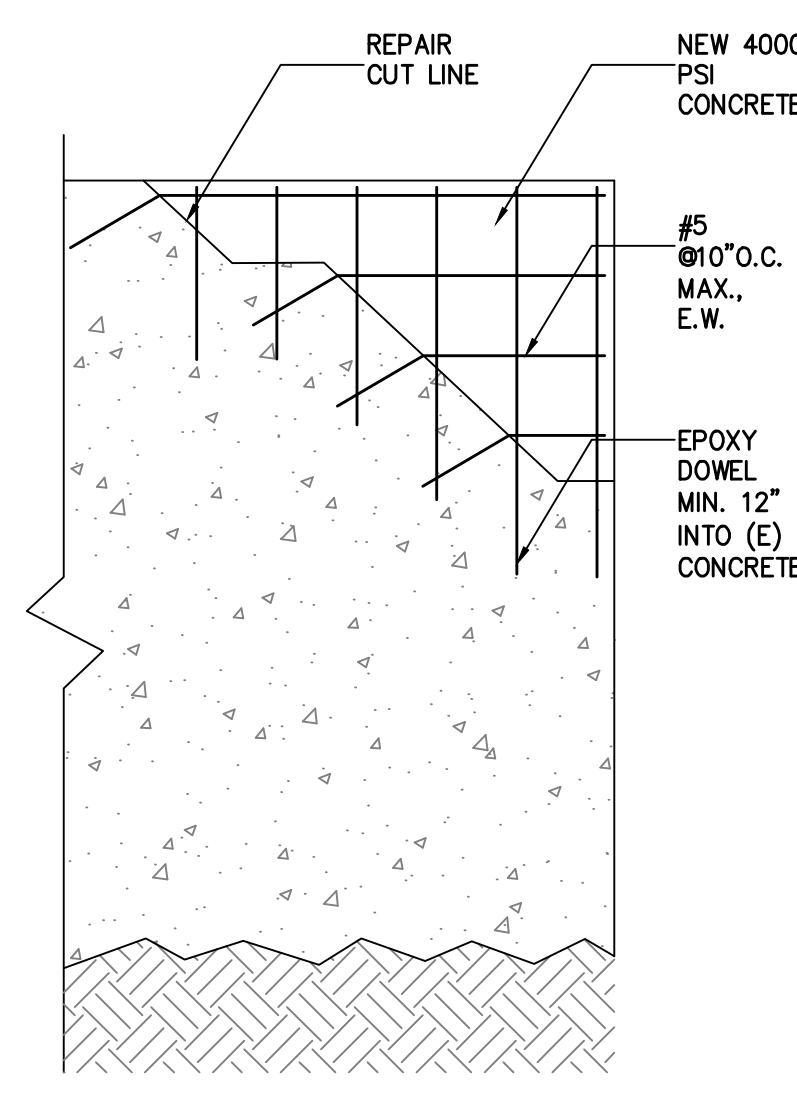
PLAN LEGEND



- NOTES:
- EPOXY BINDER MUST COMPLY WITH ASTM C881/C881M, TYPE IV, GRADE 1, CLASS C
 - MUST COMPLY WITH ASTM C307, C882, C884, D790, AND C579B

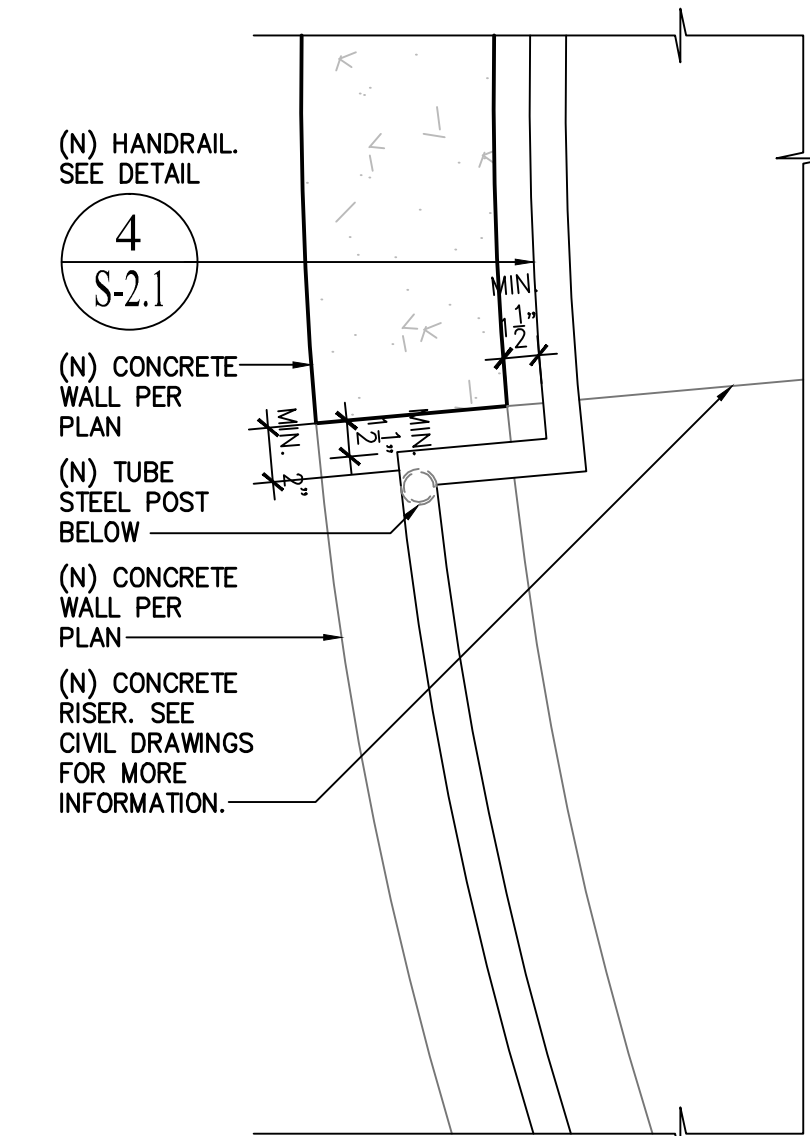


3
S-2.1
REPAIR AT LA LOMA BRIDGE ABUTMENT
SCALE: 1/2" = 1'-0"

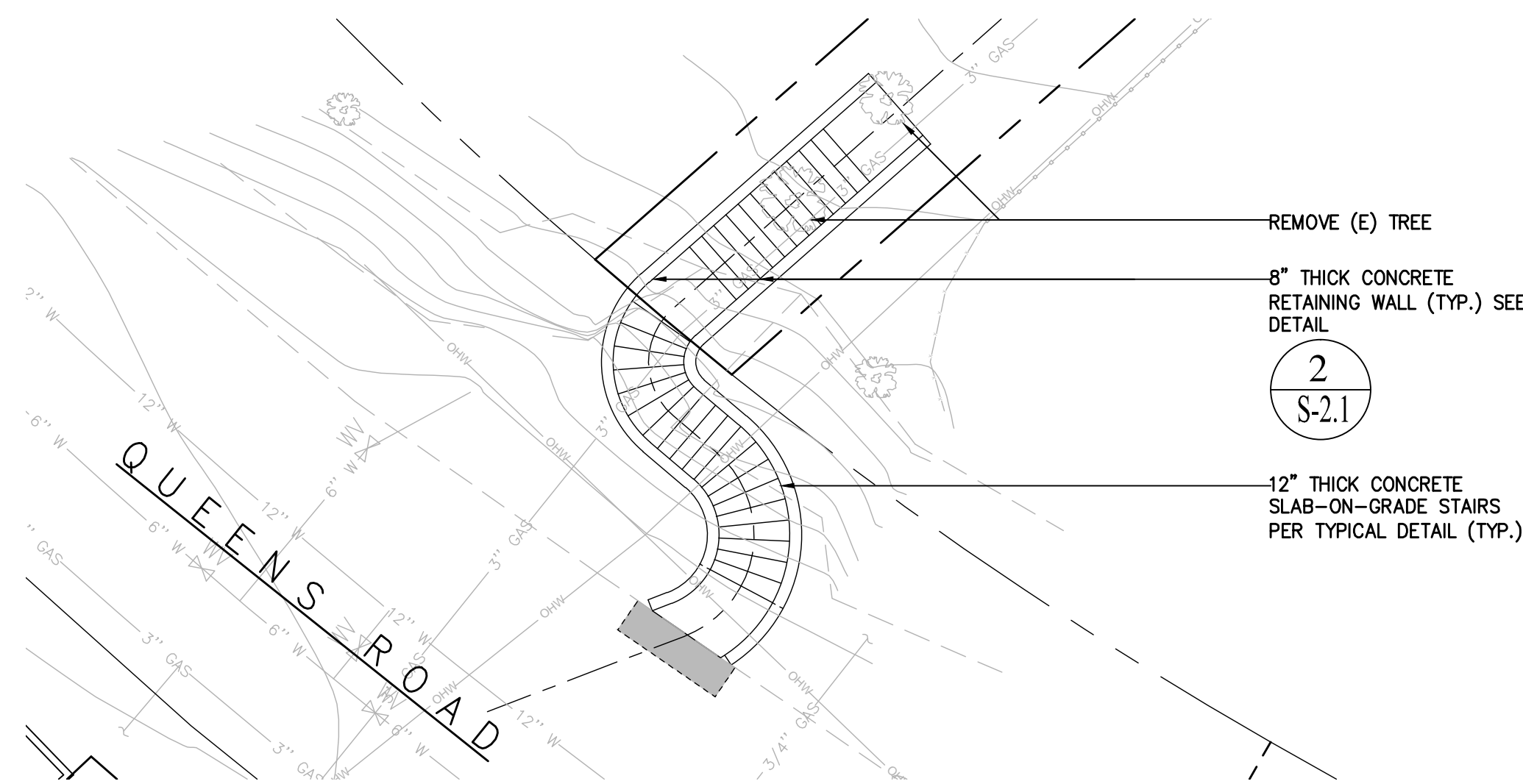


- GUARDRAIL NOTES:
- 4" ϕ SPHERE MUST NOT BE ABLE TO PASS BETWEEN ANY GUARD OPENING
 - GUARDRAIL MUST BE ABLE TO BEAR 200 LBS/SQ FT LIVE LOAD.
 - GUARDRAIL INFILL TO BEAR MIN. 50 LBS/SQ. FT.

4
S-2.1
HANDRAIL SECTION
SCALE: 3" = 1'-0"



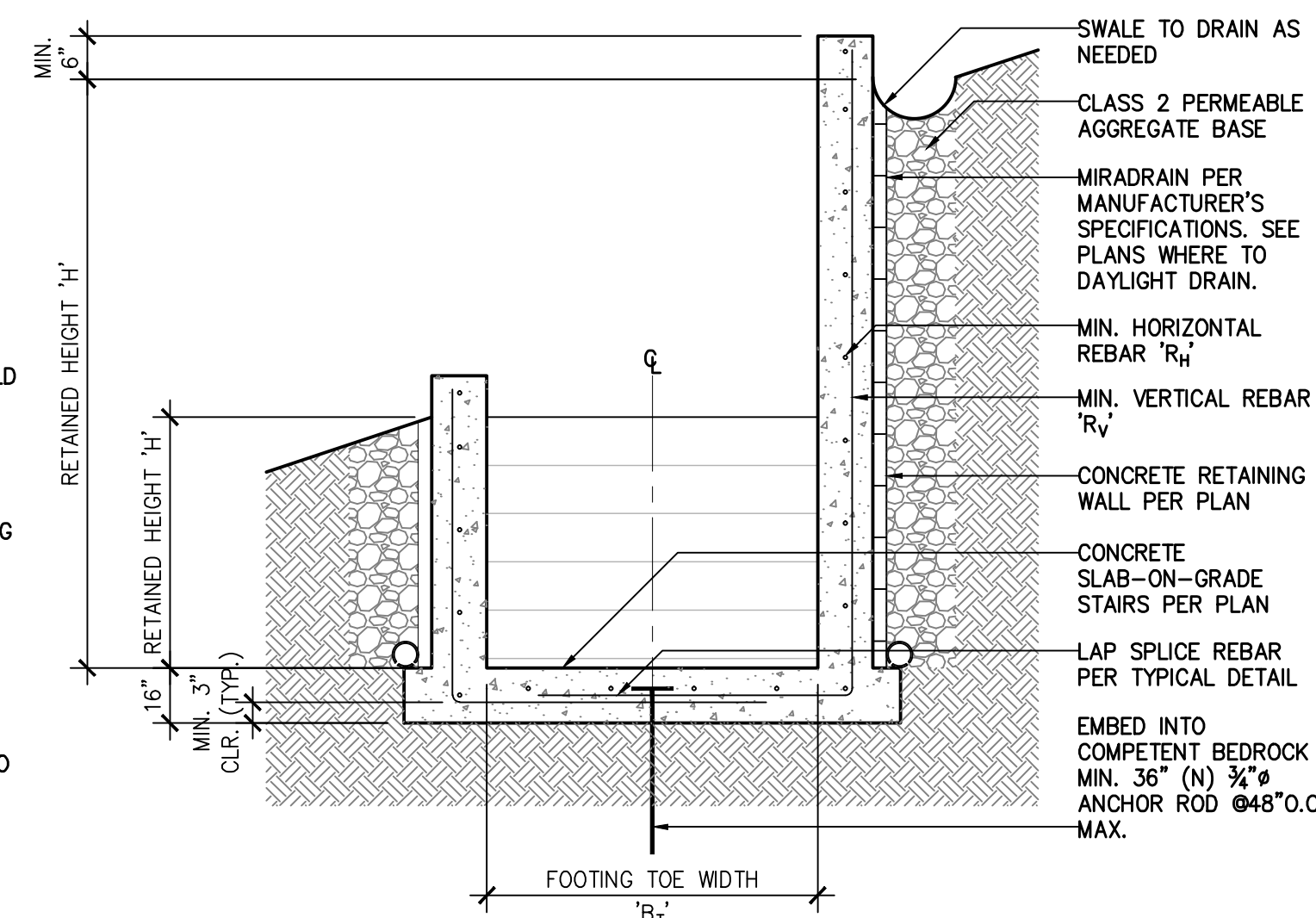
5
S-2.1
HANDRAIL PLAN DETAIL
SCALE: 1-1/2" = 1'-0"



1
S-2.1
FOUNDATION PLAN
UPPER COLUMBIA PATH
SCALE: 1/8" = 1'-0"

- NOTES:
- DURING CONSTRUCTION THE CONTRACTOR SHOULD USE APPROPRIATE METHODS SUCH AS TEMPORARY BRACING AND/OR LIGHT COMPACTION EQUIPMENT TO AVOID OVERSTRESSING THE WALLS.
 - ENGINEERED BACKFILL SHOULD BE APPROVED NON-EXPANSIVE SOILS AND OBSERVED BY ENGINEER.
 - BACKFILL OPERATIONS TO BE CARRIED OUT AFTER CONCRETE HAS GAINED SUFFICIENT STRENGTH.

2
S-2.1
RETAINING WALL SECTION DETAIL
SCALE: 1/2" = 1'-0"



RETAINING WALL SCHEDULE				
MAX H	MIN B_f	MIN R_v	MIN R_h	WALL THICKNESS
8'-0"	4'-0"	#6 REBAR @6" O.C.	#4 REBAR @12" O.C.	8"
7'-0"	4'-0"	#5 REBAR @6" O.C.	#4 REBAR @12" O.C.	8"
6'-0"	4'-0"	#5 REBAR @12" O.C.	#4 REBAR @12" O.C.	8"



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CITY ENGINEER _____ EXP. _____

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DRAWN: DL
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AS BUILT: _____

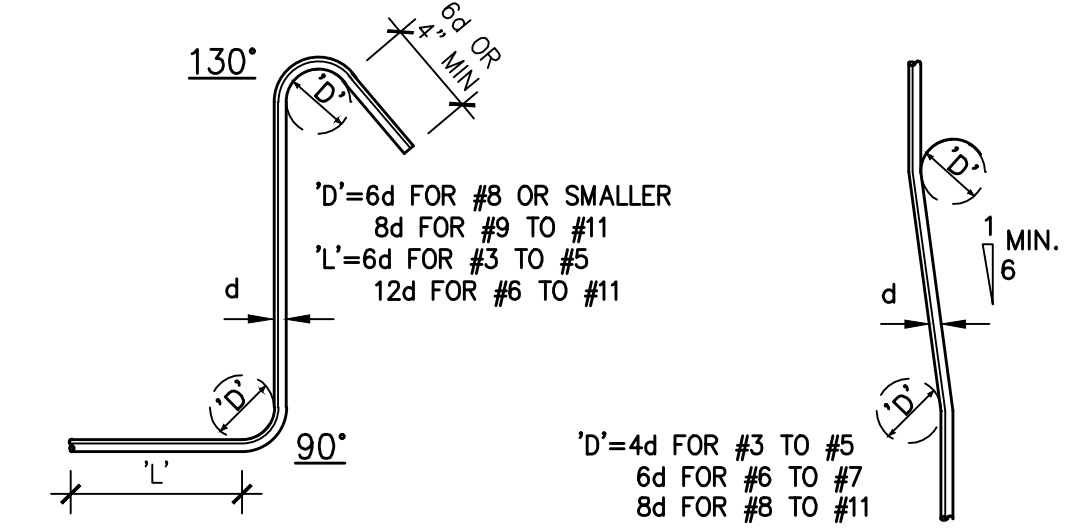
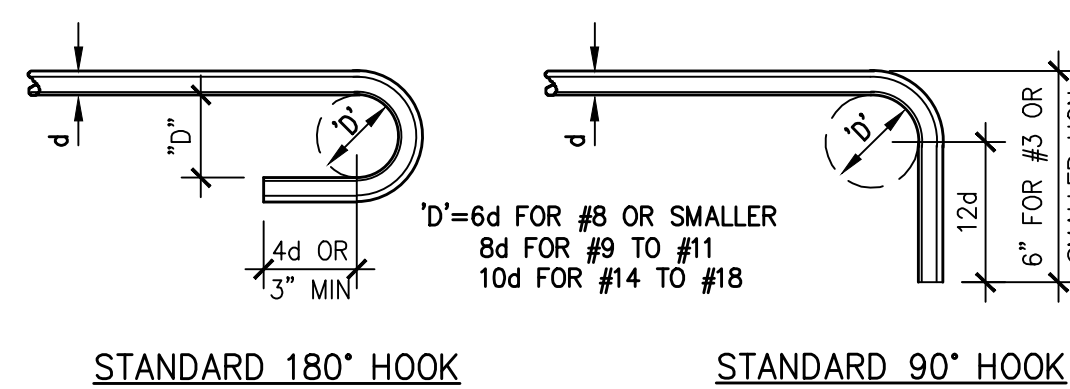
HORIZ. _____
VERT. _____
BOOK _____
DATE: 03/08/2024

CITY OF BERKELEY
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FY 2023 RETAINING WALL AND STORM DRAIN IMPROVEMENT PROJECT
S-2.1 STRUCTURAL PLANS
UPPER COLUMBIA PATH

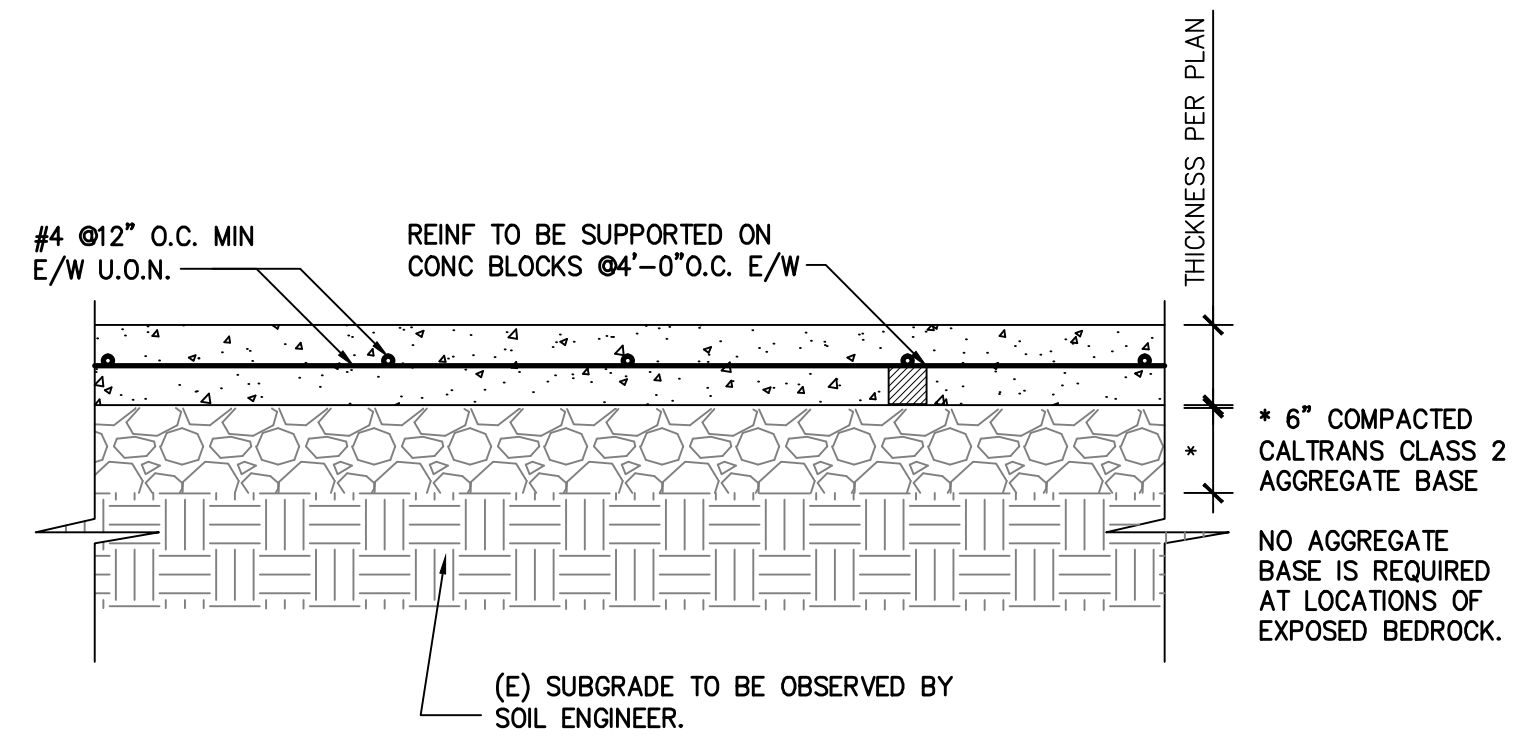
PLAN: 8278
FILE: 503-636
S-2.1
SHEET 17 OF 21

DATE	DESCRIPTION	APPROVAL
9/22/2023	100% CONSTRUCTION DOCUMENTS	

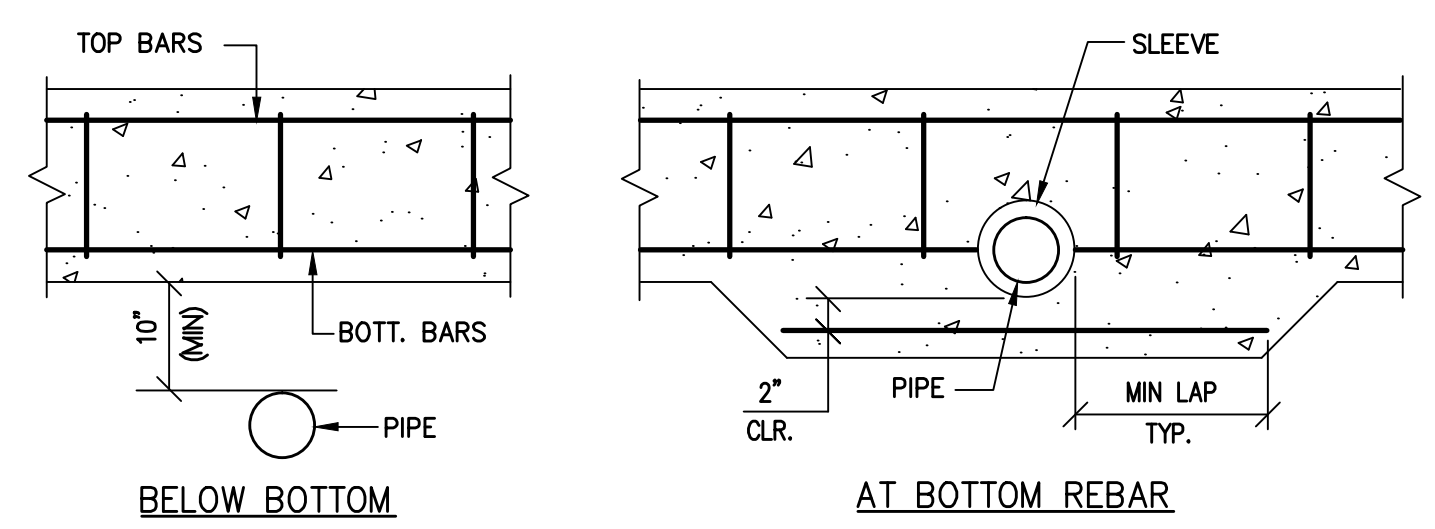


1 (S-3.0) **STANDARD REINFORCEMENT HOOKS & BENDS** NTS

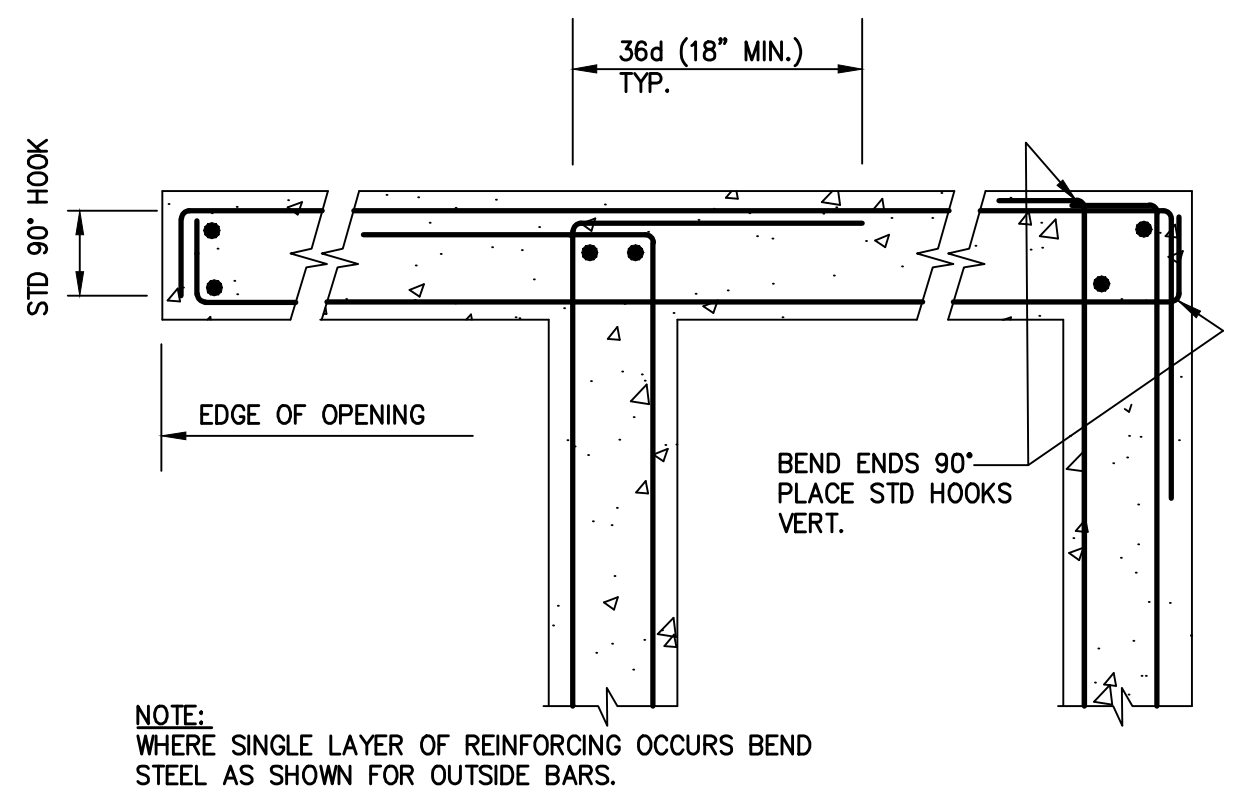
- NOTES:**
- CONTROL JOINTS @16'-0" MAX. INTERVALS. REINFORCING SHOULD BE CONTINUOUS THROUGH, PER TYP. DETAIL.
 - SUBGRADE SHALL BE OBSERVED AND APPROVED BY THE ENGINEER IN WRITING.



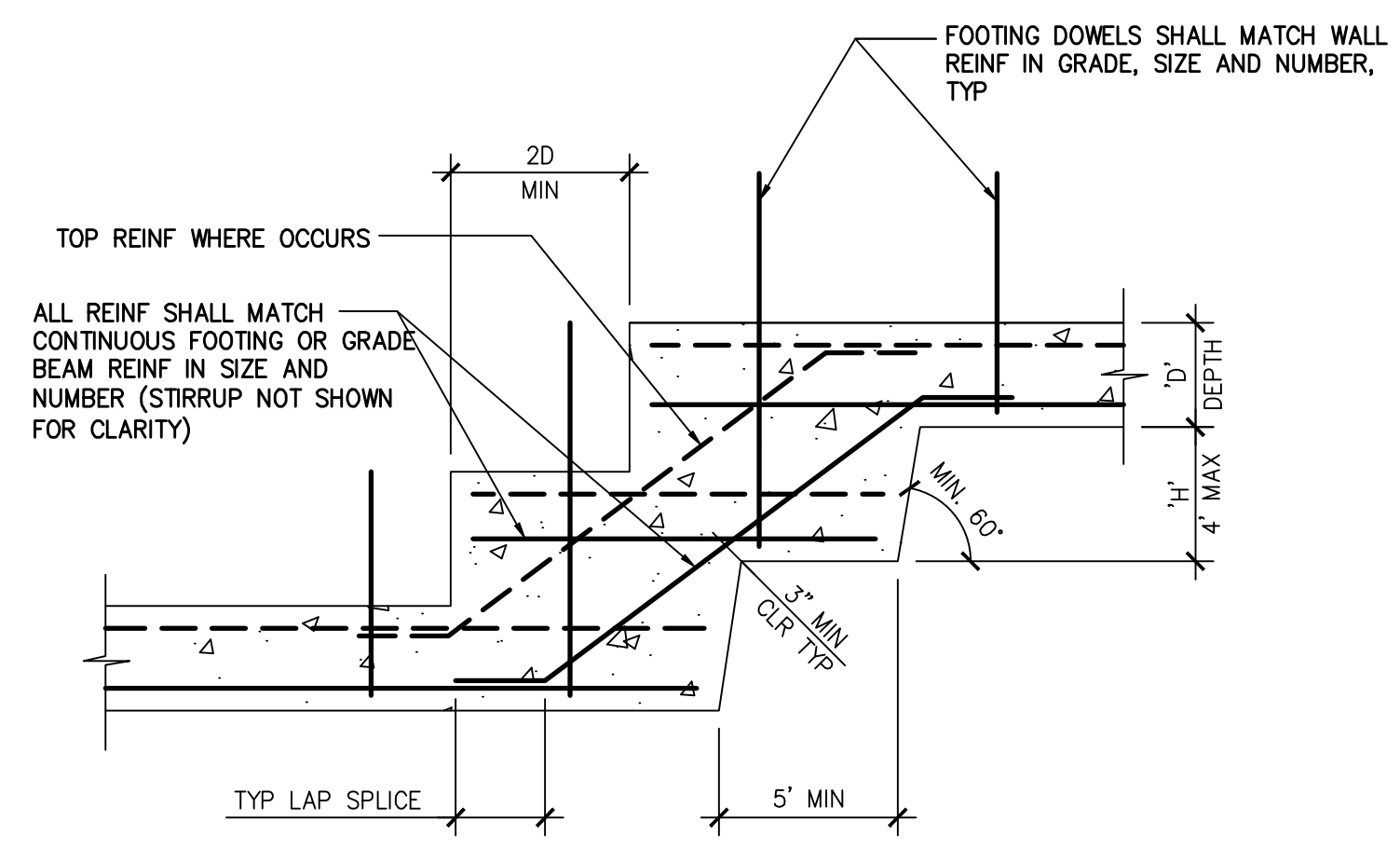
8 (S-3.0) **(TYP) SLAB-ON-GRADE** NTS



7 (S-3.0) **(TYP) PIPES ADJACENT TO FOUNDATIONS** NTS

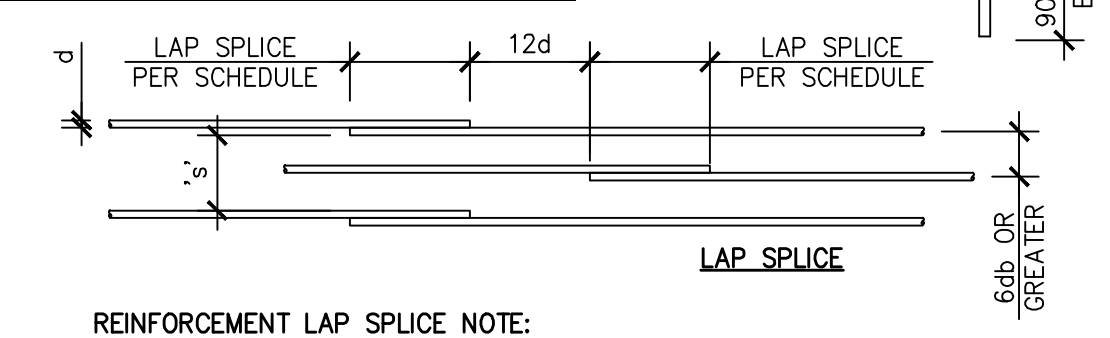


2 (S-3.0) **(TYP) REINF. HORIZONTAL BEND** NTS



3 (S-3.0) **(TYP) STEPPED FOOTING / GRADE BEAM** NTS

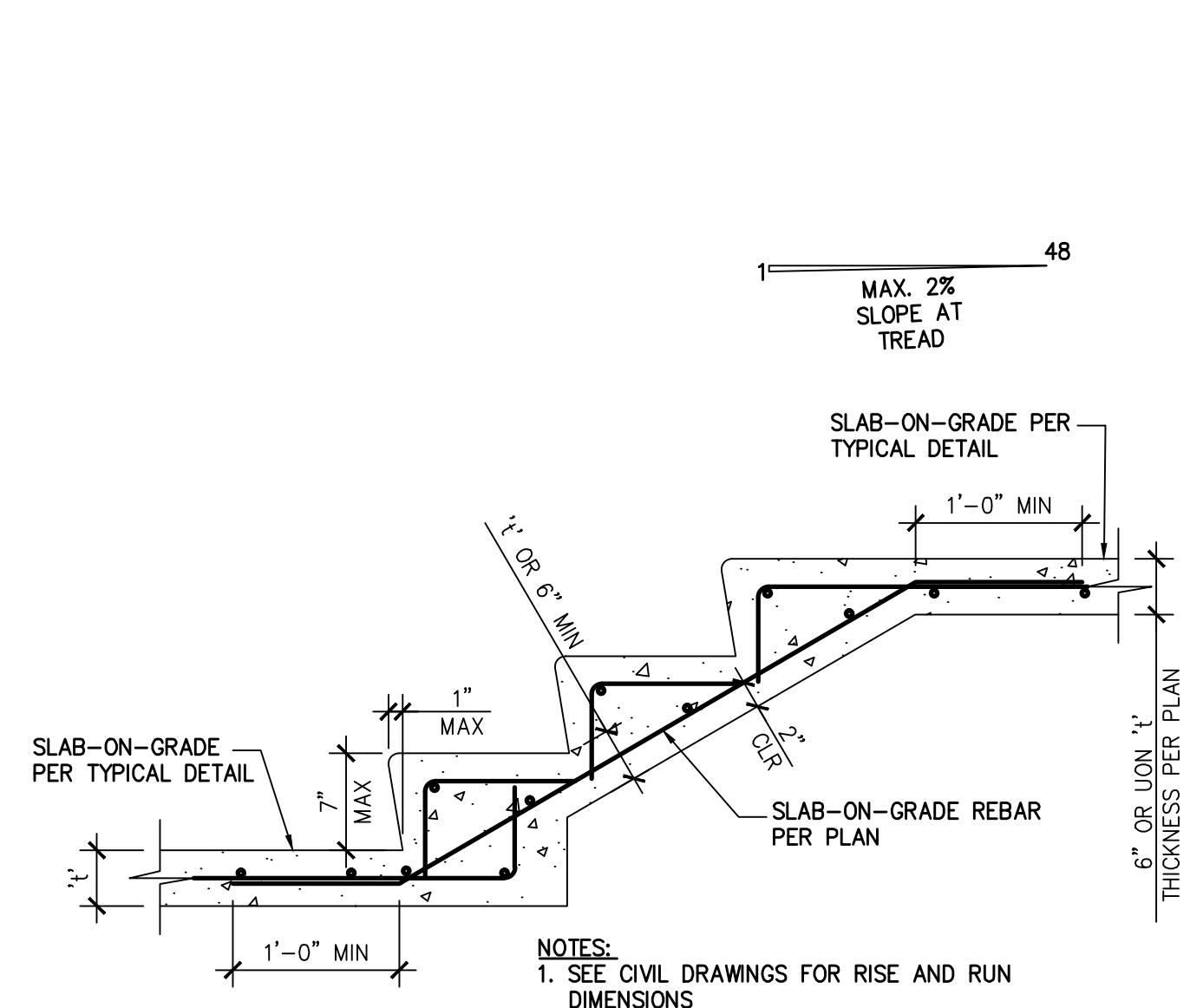
f'c CONCRETE STRENGTH	REBAR SIZE										
	GRADE 40					GRADE 60					
	#3	#4	#5	#6	#7	#8	#9	#10	#11		
	90° HOOK EMBED (INCHES)										
3000	8	10	11	14	17	20	22	25	28	31	
	LAP SPLICE LENGTH (INCHES)										
3000	12	15	22	28	33	48	55	62	70	78	



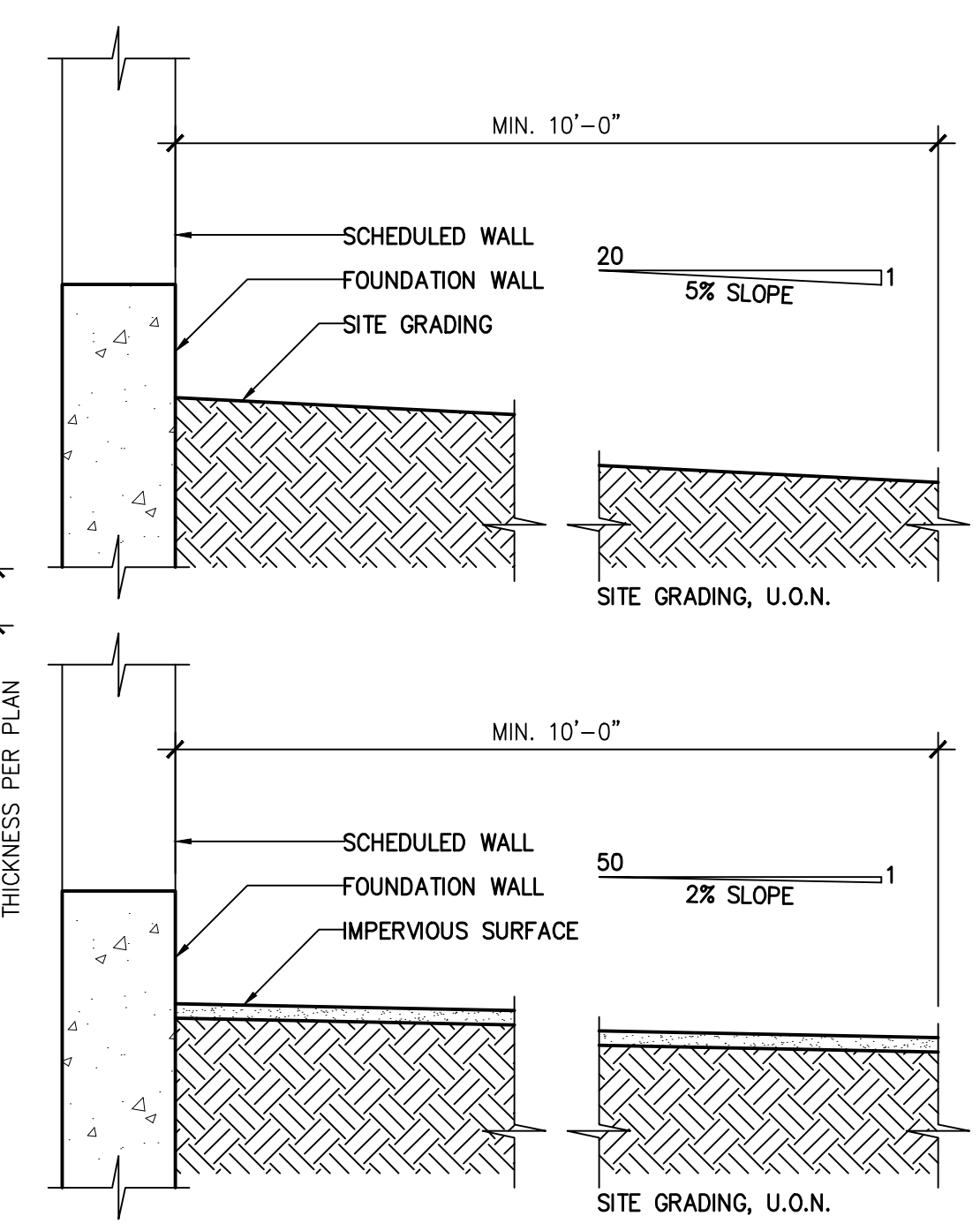
4 (S-3.0) **(TYP) REINFORCEMENT LAP SPLICE & HOOK EMBED** NTS

REINFORCEMENT LAP SPLICE NOTE:

- STAGGERED LAPS BETWEEN ADJACENT BAR SPLICE.
- MULTIPLY ALL LENGTH BY 1.5 IF EITHER OF THE FOLLOWING ARE TRUE.
 A. CLEAR COVER IS LESS THAN 1 BAR DIAMETER (d)
 B. CLEAR SPACING OF BARS IS LESS THAN 2d
- NONCONTACT SPLICE WITH MIN 3d SPACING SHALL BE USED FOR SHOTCRETE.

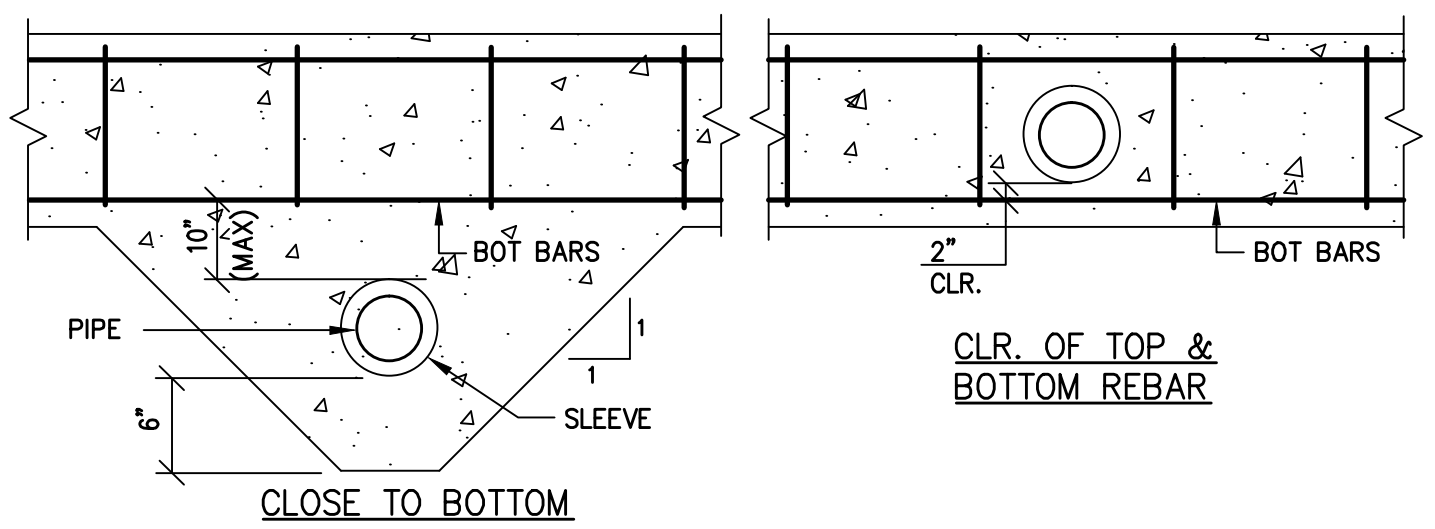


10 (S-3.0) **(TYP) CONCRETE STAIR ON GRADE** NTS



11a (S-3.0) **SITE GRADING** NTS

11b (S-3.0) **SITE GRADING** NTS



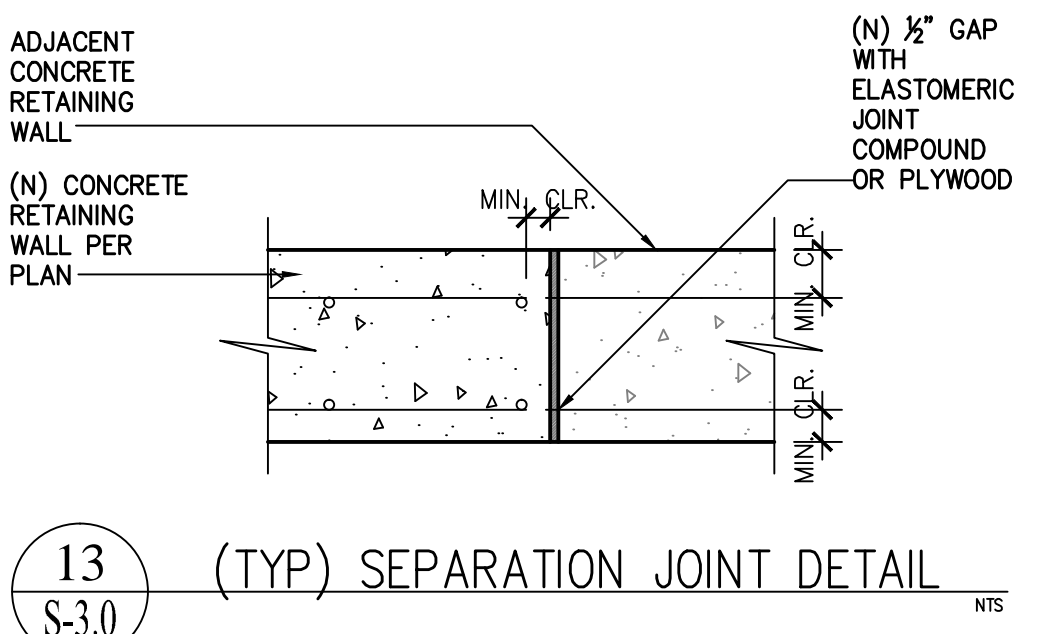
12 (S-3.0) **(TYP) EPOXY DOWEL DETAIL** NTS

NOTE: SEE "ADHESIVE ANCHOR NOTES" ON SHEET S-1.0.

(E) CONCRETE RETAINING WALL (V.I.F.)

(N) CONCRETE RETAINING WALL PER PLAN

EPOXY DOWEL (N) REBAR MIN. 8" INTO (E) CONCRETE (TYP.)



13 (S-3.0) **(TYP) SEPARATION JOINT DETAIL** NTS

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0 1 2 3
 FOR REDUCED PLANS - ORIGINAL SCALE IS IN INCHES

DEPICTION OF MONUMENTS: _____ DATE _____
 SUBMITTED: _____ DATE _____
 SUPERVISING ENGINEER: _____ EXP. _____
 APPROVED: _____ DATE _____
 CITY ENGINEER: _____ EXP. _____

DESIGN: DA
 DRAWN: DL
 CHECK: DA
 AS BUILT: _____

HORIZ.: _____
 VERT.: _____
 BOOK: _____
 DATE: 03/08/2024

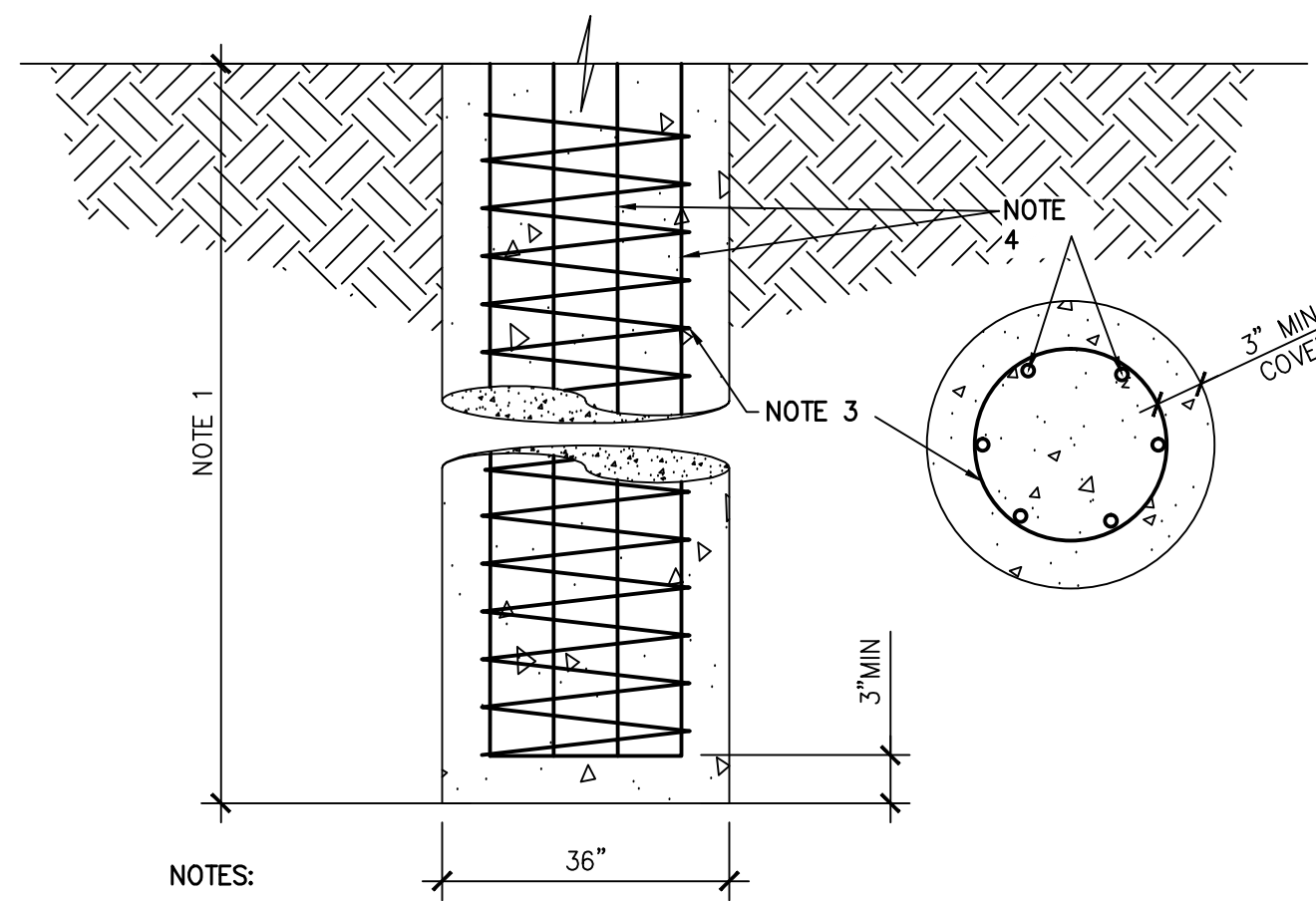
CITY OF BERKELEY
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FY 2023 RETAINING WALL AND STORM DRAIN IMPROVEMENT PROJECT
 S-3.0 TYPICAL STRUCTURAL DETAILS

PLAN 8278
 FILE 503-636
 S-3.0
 SHEET 18 OF 21

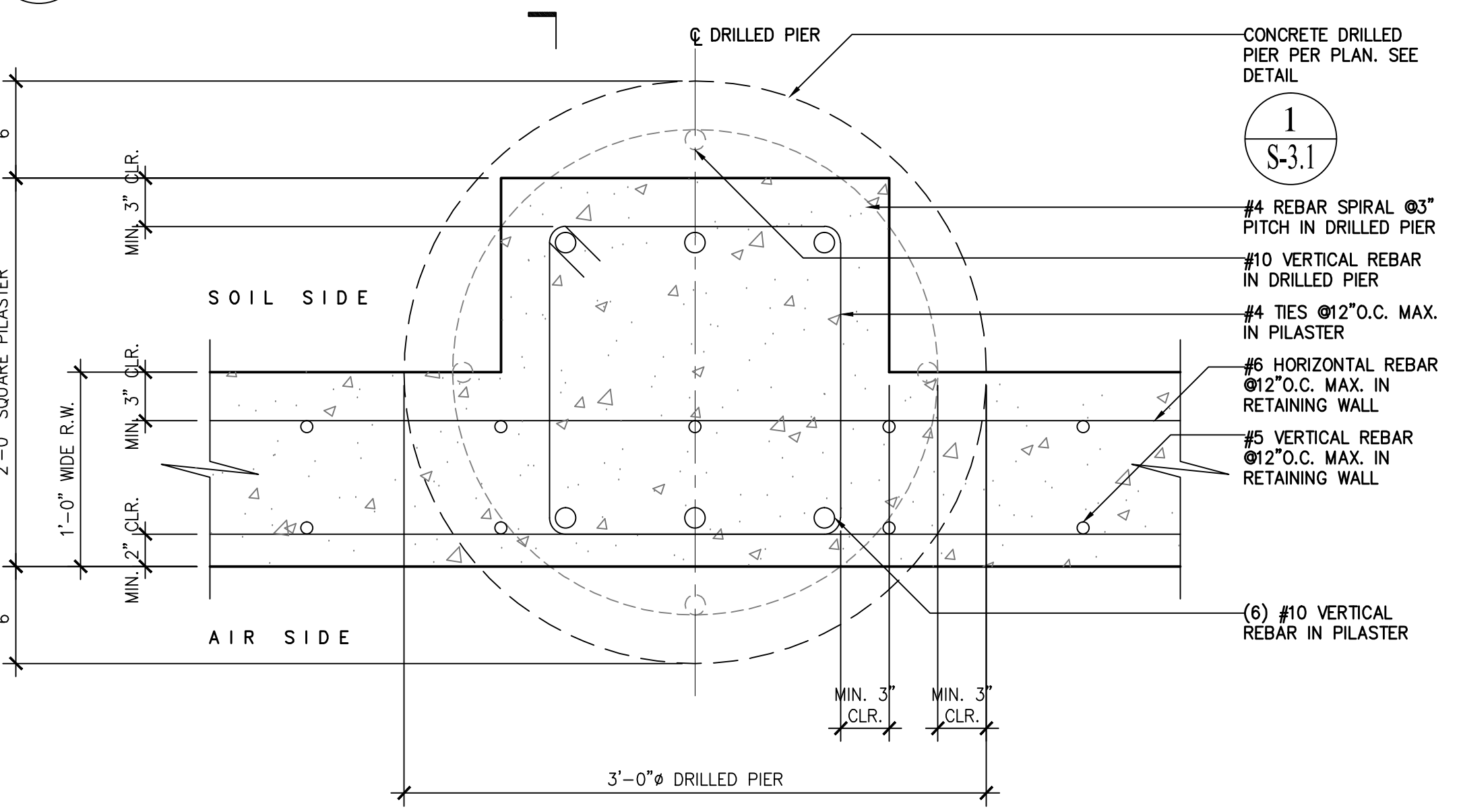


REVISION	MARK	DATE	DESCRIPTION	APPROVAL

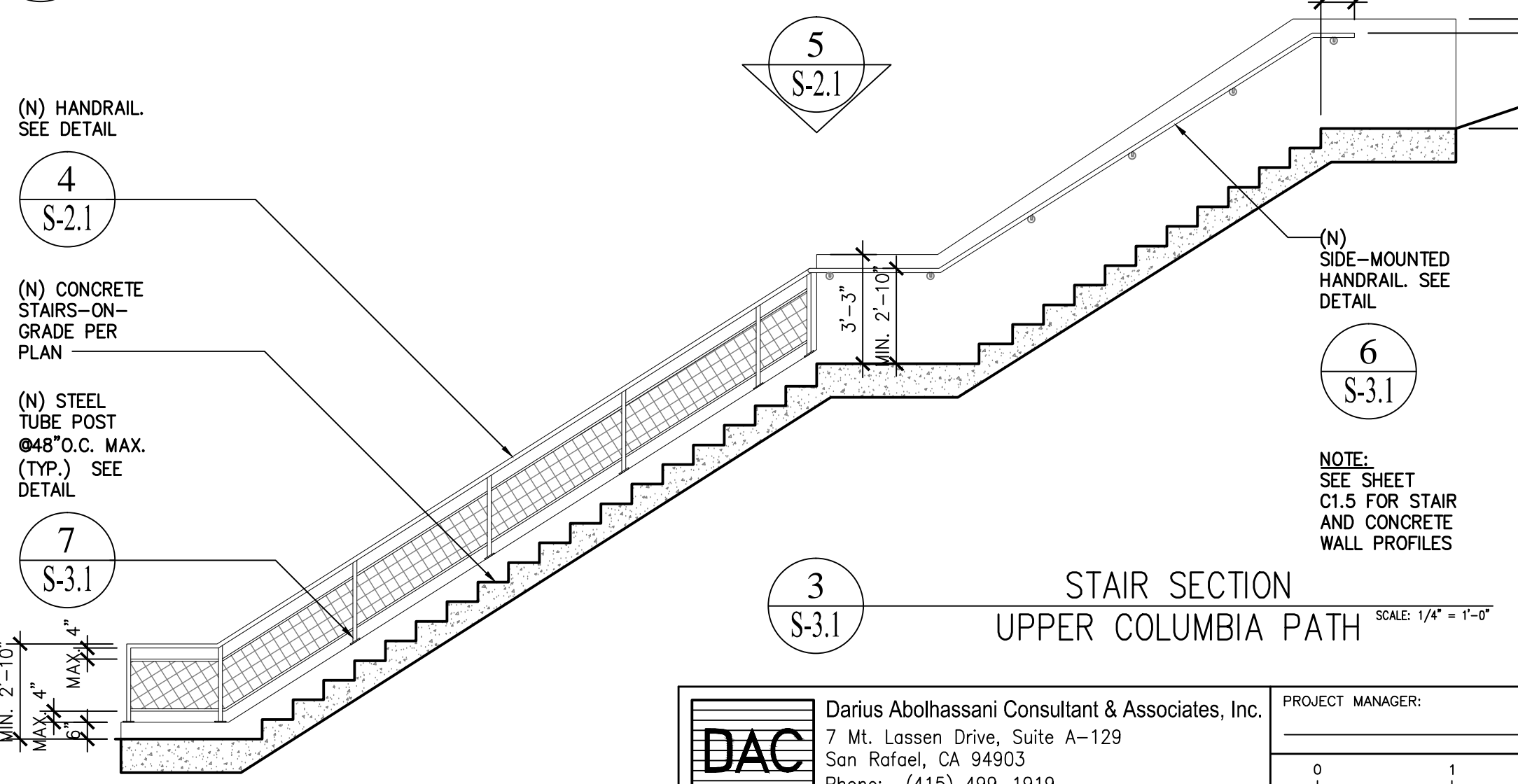


- NOTES:
1. DEPTH OF PIER VARIES DEPENDING ON THE DEPTH OF BEDROCK. 6'-0" MINIMUM INTO COMPETENT SUBGRADE. CONTRACTOR SHALL CONTACT THE ENGINEER TO OBSERVE EXCAVATION AND VERIFY ADEQUATE DEPTH IN WRITING BEFORE POURING CONCRETE.
 2. CONCRETE MINIMUM COMPRESSIVE STRENGTH $F_c=4000$ PSI AT 28 DAYS.
 3. USE #4 AT 3" PITCH.
 4. USE (6) #10 VERTICAL REBAR BENT EXTEND 1/2 RETAINED HEIGHT (24" MIN) WHERE APPLY.

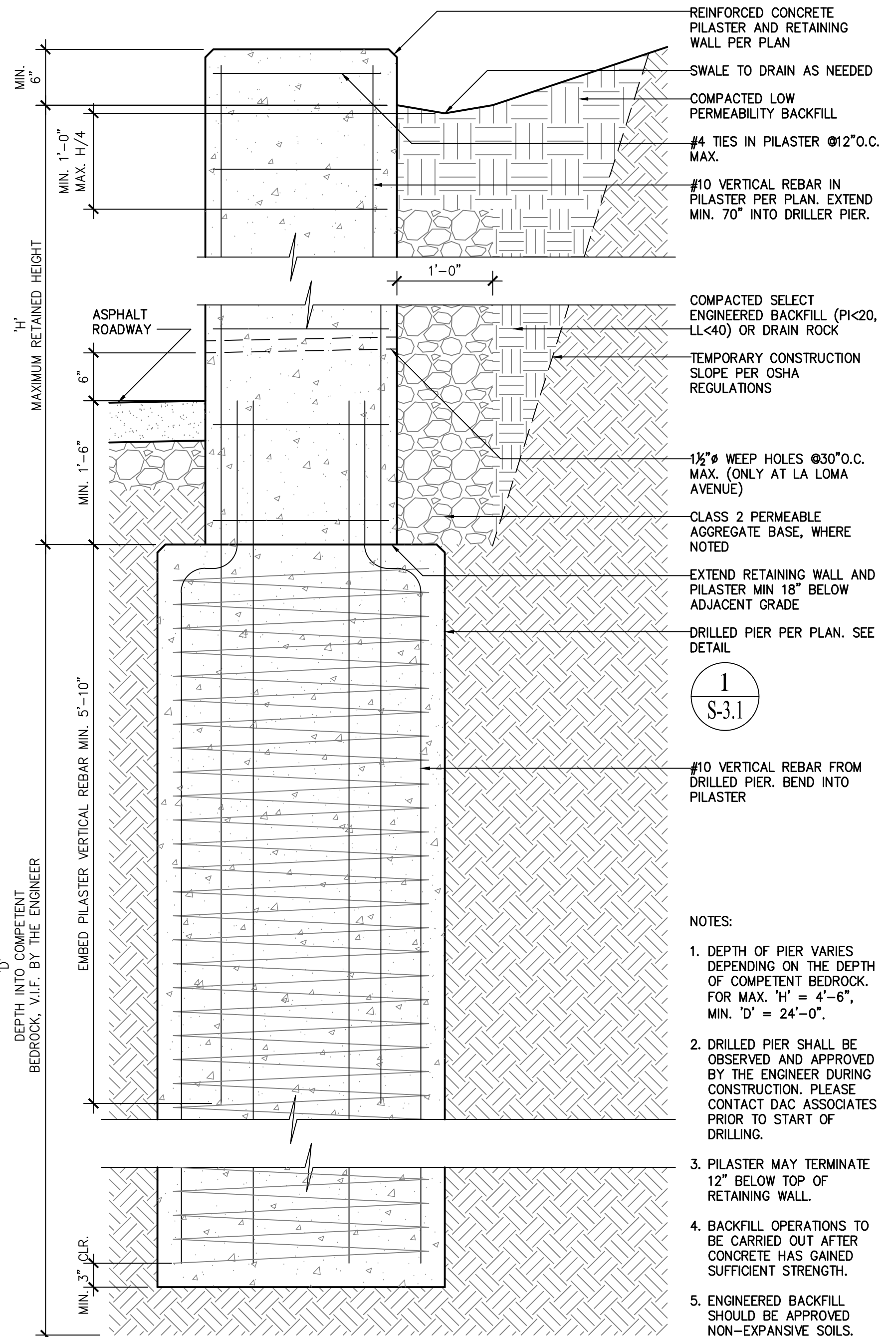
1 STRUCTURAL DETAIL
S-3.1 SCALE: NTS



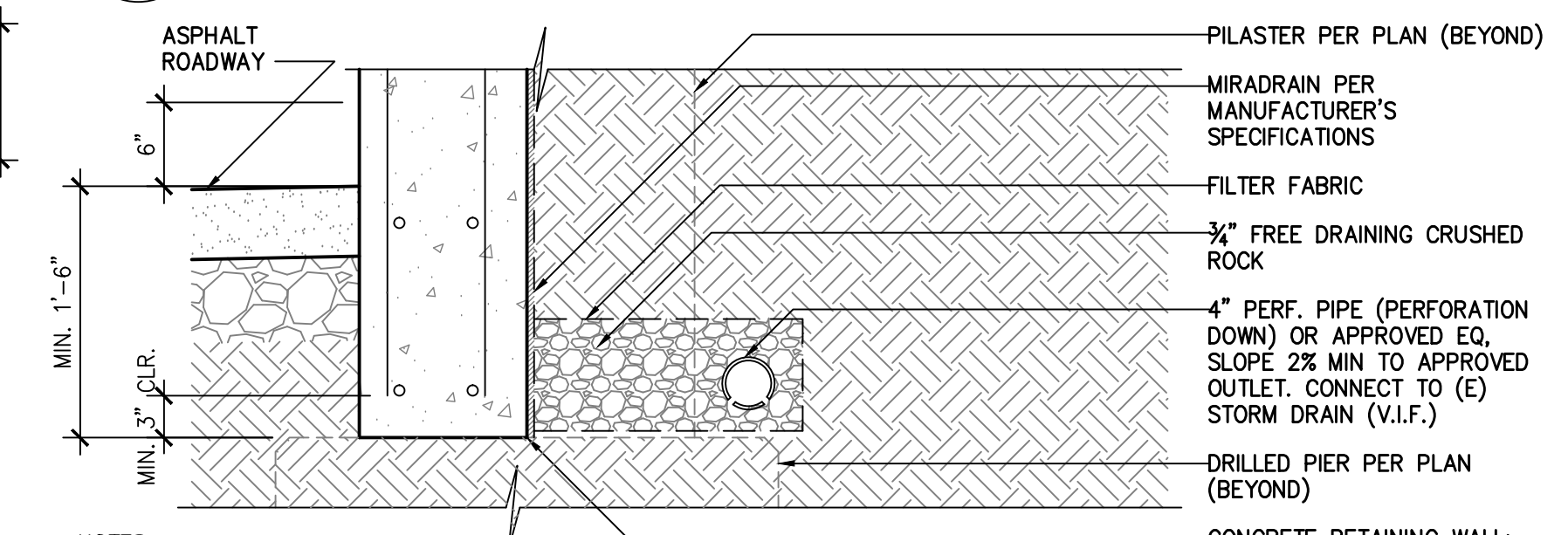
2 PILASTER PLAN DETAIL
S-3.1 SCALE: 1-1/2" = 1'-0"



3 STAIR SECTION UPPER COLUMBIA PATH
S-3.1 SCALE: 1/4" = 1'-0"



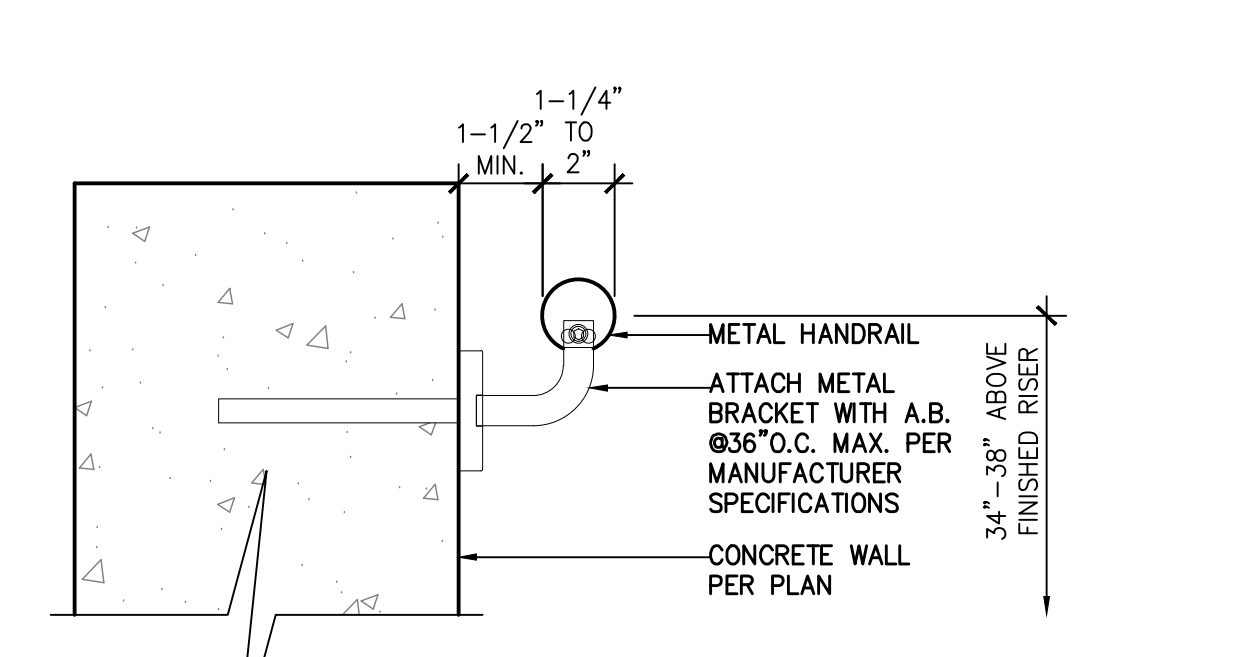
4 PILASTER SECTION DETAIL
S-3.1 SCALE: 1" = 1'-0"



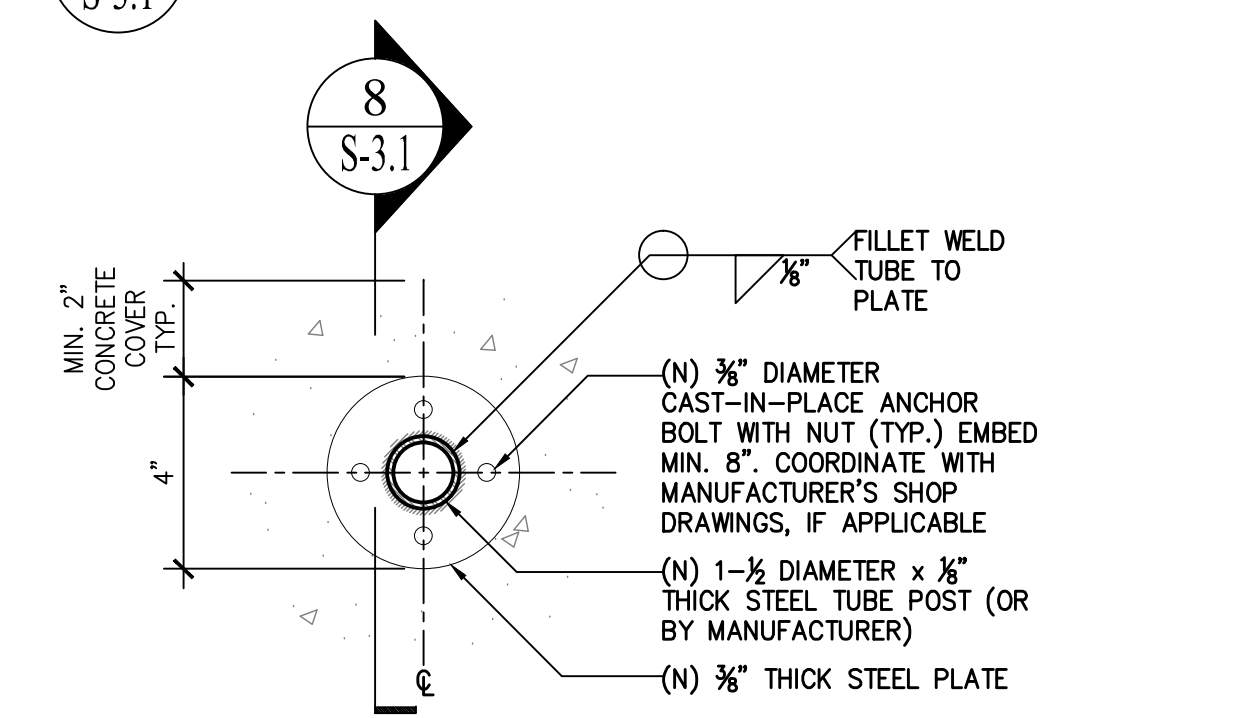
5 SUB-DRAIN SECTION DETAIL
S-3.1 SCALE: 1" = 1'-0"

- NOTES:
1. DEPTH OF PIER VARIES DEPENDING ON THE DEPTH OF COMPETENT BEDROCK. FOR MAX. 'H' = 4'-6", MIN. 'D' = 24'-0".
 2. DRILLED PIER SHALL BE OBSERVED AND APPROVED BY THE ENGINEER DURING CONSTRUCTION. PLEASE CONTACT DAC ASSOCIATES PRIOR TO START OF DRILLING.
 3. PILASTER MAY TERMINATE 12" BELOW TOP OF RETAINING WALL.
 4. BACKFILL OPERATIONS TO BE CARRIED OUT AFTER CONCRETE HAS GAINED SUFFICIENT STRENGTH.
 5. ENGINEERED BACKFILL SHOULD BE APPROVED NON-EXPANSIVE SOILS.

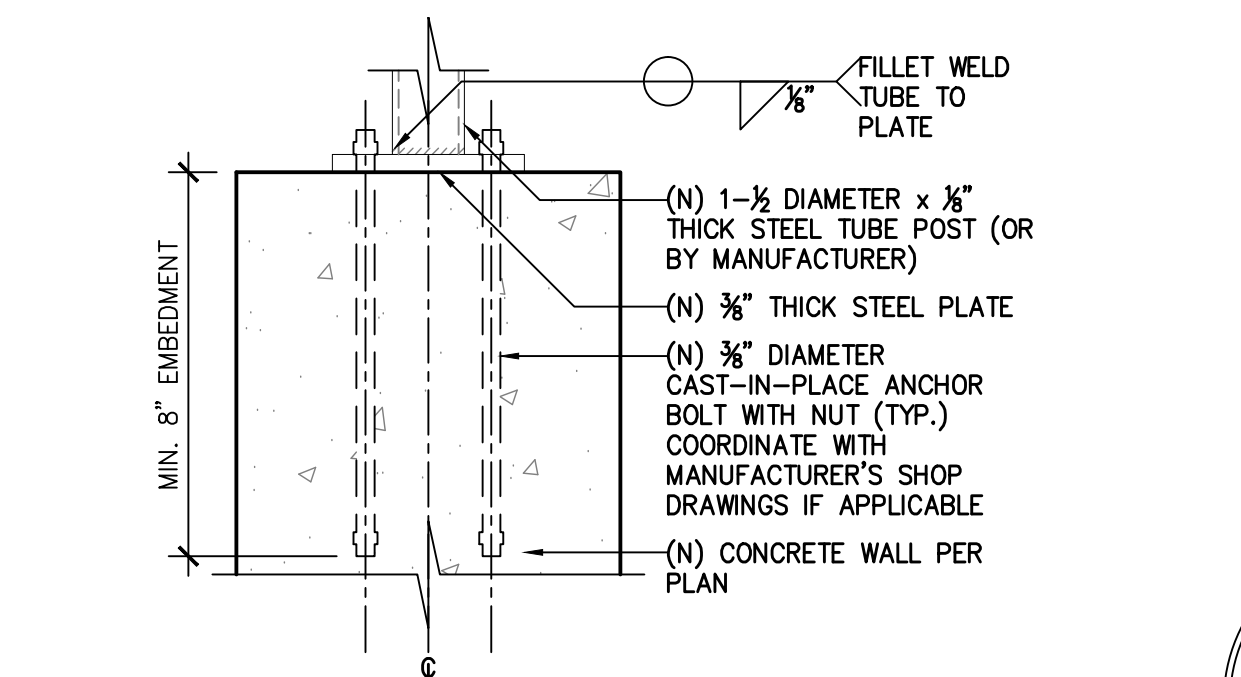
- STAIR NOTES:
1. PROVIDE NOSING AT STAIR TREADS MEASURING LESS THAN 11".
 2. WINDER TREADS SHALL MEASURE 10" MIN. AT THE WALK-LINE, 12" INSIDE FROM THE CURVE, CONCENTRIC AND CONSISTENTLY SHAPED AT THE WALK-LINE, 6" MIN. WIDTH ANYWHERE IN THE CLEAR AREA.
 3. VARIATION OF NOT MORE THAN 3/8" BETWEEN LARGEST AND SMALLEST RISER HEIGHTS OR LARGEST AND SMALLEST TREAD DEPTH WITHIN ANY FLIGHT OF STAIRS THAT IS MEASURED FROM NOSE-TO-NOSE OF THE TREADS IS PERMITTED.
 4. MIN. CLEAR WIDTH OF STAIRWAY TO BE 36". HANDRAILS SHALL NOT PROJECT MORE THAN 4-1/2" INTO CLEAR WIDTH, LEAVING 31-1/2" WHERE HANDRAIL IS INSTALLED ON ONE SIDE, AND 27" CLEAR WIDTH WHERE HANDRAILS ARE INSTALLED ON BOTH SIDES.
 5. WALKING SURFACE OF TREADS AND LANDINGS OF STAIRWAYS SHALL BE SLOPED NO STEEPER THAN 1" VERTICAL IN 48" HORIZONTAL (2%).
 6. THERE SHALL BE A FLOOR OR LANDING AT THE TOP AND BOTTOM OF EACH STAIRWAY WITH LENGTH IN DIRECTION OF TRAVEL NOT LESS THAN 36" OR WIDTH OF STAIRWAY SERVED. AN INTERMEDIATE LANDING SHALL BE PROVIDED FOR EVERY 147" OF STAIRWAY HEIGHT. FLOOR OF LANDING IS NOT REQUIRED AT TOP OF INTERIOR FLIGHT OF STAIRS, INCLUDING STAIRS IN ENCLOSED GARAGES, PROVIDED THE DOOR DOES NOT SWING OVER THE STAIRS.
 7. HANDRAIL ENDS SHALL BE RETURNED OR SHALL TERMINATE IN NEWEL POSTS OR SAFETY TERMINALS. HANDRAILS ADJACENT TO A WALL SHALL HAVE A SPACE OF NOT LESS THAN 1-1/2" BETWEEN WALL AND HANDRAILS.
 8. HANDRAILS AND GUARDS SHALL BE DESIGNED TO RESIST CONCENTRATED LOAD OF 200 LBS IN ACCORDANCE WITH SECTION 4.5.1 OF ASCE 7.
 9. HANDRAIL HEIGHT MIN. 34", MAX. 38", ABOVE FINISHED RISE.
 10. HANDRAIL DIAMETER MIN. 1-1/2", MAX. 2". IF NOT CIRCULAR, THE HANDRAIL SHALL HAVE A PERIMETER DIMENSION OF 4" MIN. AND 6-3/4" MAX. WITH A MAX. CROSS SECTION OF 2-1/4".



6 SIDE-MOUNTED HANDRAIL DETAIL
S-3.1 SCALE: 3" = 1'-0"



7 TOP-MOUNTED HANDRAIL PLAN DETAIL
S-3.1 SCALE: 3" = 1'-0"



8 TOP-MOUNTED HANDRAIL SECTION DETAIL
S-3.1 SCALE: 3" = 1'-0"

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R.C.E. _____
EXP. _____

DESIGN DA _____
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CHECK DA _____
AS BUILT _____

HORIZ. _____
VERT. _____
BOOK _____
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CITY OF BERKELEY
DEPARTMENT OF PUBLIC WORKS
FY 2023 RETAINING WALL AND STORM DRAIN IMPROVEMENT PROJECT
S-3.1 STRUCTURAL DETAILS

PLAN 8278
FILE 503-636
S-3.1
SHEET 19 OF 21



REVISION	MARK	DATE	DESCRIPTION	APPROVAL

BMP	GENERAL DESCRIPTION
EROSION CONTROL BMPs	
A PRESERVE EXISTING VEGETATION	EXISTING VEGETATION SHOULD BE PRESERVED AS MUCH AS POSSIBLE. CASQA: EC-2.
B SOIL COVER	COVER ALL EXPOSED SOIL WITH STRAW MULCH AND TACKIFIER (OR EQUIVALENT). CASQA: EC-3, EC-5, EC-6, EC-7, EC-14, AND EC-16.
C EROSION CONTROL BLANKETS OR EQUIVALENT	INSTALL EROSION CONTROL, BLANKETS (OR EQUIVALENT) ON ANY DISTURBED SITE WITH 3:1 SLOPES OR STEEPER, KEYED INTO THE GROUND AT LEAST 3 INCHES. USE WILDLIFE-FRIENDLY BLANKETS MADE OF BIODEGRADABLE NATURAL MATERIALS. AVOID USING BLANKETS MADE WITH PLASTIC NETTING OR FIXED APERTURE NETTING. CASQA: EC-7.
D REVEGETATION	AREAS OF DISTURBED SOIL/VEGETATION SHOULD BE REVEGETATED AS SOON AS PRACTICAL. CASQA: EC-4.
SEDIMENT CONTROL BMPs	
E STABILIZED SITE ENTRANCE	STABILIZE SITE ENTRANCE AND TEMPORARY DRIVEWAY. USE 3 TO 4-INCH CRUSHED ROCK FOR A MINIMUM OF 50 FEET (OR AS FAR AS POSSIBLE) TO PREVENT TRACKING SOIL OFFSITE. THIS CAN BE USED IN CONJUNCTION WITH A TIRE WASH OR RUMBLE PLATES. CASQA: TC-1; TC-3.
F FIBER ROLLS (E.G. STRAW WATTLES)	USE FIBER ROLLS ALONG CONTOURS OF SHORT SLOPES 3:1 OR FLATTER, KEYED INTO GROUND AT LEAST 3-INCHES DEEP (TYPICALLY 25 FEET APART). USE WILDLIFE-FRIENDLY FIBER ROLLS MADE OF BIODEGRADABLE NATURAL MATERIALS. AVOID USING FIBER ROLLS MADE WITH PLASTIC NETTING OR FIXED APERTURE NETTING. CASQA: SE-5.
G SILT FENCE	INSTALL SILT FENCE ALONG CONTOURS AS SECONDARY MEASURE TO KEEP SEDIMENT ONSITE AND TO MINIMIZE VEHICLE AND FOOT TRAFFIC BEYOND LIMITS OF SITE DISTURBANCE. SILT FENCING MUST BE KEYED IN. CASQA: SE-1.
H DRAIN INLET PROTECTION	USE PEA-GRAVEL BAGS, (OR SIMILAR PRODUCT) AROUND DRAIN INLETS LOCATED BOTH ONSITE AND IN GUTTER AS A LAST LINE OF DEFENSE. CASQA: NS-2.
GOOD HOUSEKEEPING BMPs	
I CONCRETE WASHOUTS	CONSTRUCT A CONCRETE WASHOUT SITE PLACED AT LEAST 50 FEET AWAY FROM STORM DRAINS, WATERBODIES, OR OTHER DRAINAGES. IDEALLY, PLACE ADJACENT TO STABILIZED ENTRANCE. CLEAN AS NEEDED AND REMOVE AT END OF PROJECT. CASQA: WM-8.
J STOCKPILE MANAGEMENT	COVER ALL STOCKPILES AND LANDSCAPE MATERIAL AND BERM PROPERLY WITH FIBER ROLLS OR SAND BAGS. KEEP BEHIND SILT FENCE, AWAY FROM WATERBODIES. AVOID USE OF PLASTIC SHEETING WHERE POSSIBLE TO KEEP PLASTIC FROM ENTERING WATERBODIES. CASQA: WM-3.
K HAZARDOUS MATERIAL MANAGEMENT	HAZARDOUS MATERIALS MUST BE KEPT IN CLOSED CONTAINERS THAT ARE COVERED AND UTILIZE SECONDARY CONTAINMENT, NOT DIRECTLY ON SOIL. CASQA: WM-6.
L SANITARY WASTE MANAGEMENT	PLACE PORTABLE TOILETS NEAR STABILIZED SITE ENTRANCE, BEHIND THE CURB AND AWAY FROM GUTTERS, STORM DRAIN INLETS, AND WATERBODIES. ALL PORTABLE BATHROOMS SHOULD HAVE OVERFLOW PAN/TRAY (MOST VENDORS PROVIDE THESE). CASQA: WM-9.
M EQUIPMENT AND VEHICLE MAINTENANCE	PAVEMENT EQUIPMENT FLUID LEAKS ONTO GROUND BY PLACING DRIP PANS OR PLASTIC TARPS UNDER EQUIPMENT. CASQA: NS-8, NS-9, AND NS-10.

POLLUTION CONTROL NOTES:

- IF SIGNIFICANT SEDIMENT OR OTHER VISUAL SYMPTOMS OF IMPURITIES ARE NOTICED IN THE STORM WATER, CONTACT THE CITY ENGINEER IMMEDIATELY.
- CONTRACTOR IS RESPONSIBLE FOR INSPECTION AND RESTORATION OF ALL ASPECTS OF THIS PLAN. SEDIMENT ON SIDEWALKS AND GUTTERS SHALL BE REMOVED BY SHOVEL AND/OR BROOM AND PLACED IN STOCKPILES.
- ALL DUMPSTERS OR OTHER TRASH STORAGE ENCLOSURES SHALL BE UTILIZED SOLELY FOR NON-HAZARDOUS MATERIALS.
- ALL EMPLOYEES, CONTRACTORS, AND SUBCONTRACTORS ARE RESPONSIBLE FOR CONFORMING TO THE ELEMENTS SHOWN ON THIS PLAN OR RELATED DOCUMENTS.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS AND FILING ALL PLANS WITH RELATED AGENCIES ASSOCIATED WITH THEIR WORK. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, PERMITS FOR STORAGE OF HAZARDOUS MATERIALS, BUSINESS PLANS, PERMITS FOR STORAGE OF FLAMMABLE LIQUIDS, GRADING PERMITS, OR OTHER PLANS OR PERMITS REQUIRED BY ALAMEDA COUNTY, THE CITY OF BERKELEY, OR OTHER AGENCIES. ALL CONTRACTORS, OR SUBCONTRACTORS WORKING ON-SITE ARE INDIVIDUALLY RESPONSIBLE FOR OBTAINING AND SUBMITTING ANY BUSINESS PLANS OR PERMITS REQUIRED BY CITY, STATE OR LOCAL AGENCIES.
- CONTRACTOR SHALL LOCATE STORAGE, DELIVERY, OR WASH-OUT AREAS, TO SUIT THEIR OPERATIONS. CONTRACTOR TO MAINTAIN SECONDARY CONTAINMENT AS NECESSARY TO PROHIBIT POLLUTION AND TOXIC MATERIALS FROM ENTERING STORM DRAIN.
- CONTRACTOR SHALL UTILIZE SILT FILTERS DURING CONCRETE CONSTRUCTION NEAR EXISTING STORM DRAINAGE SYSTEM. AFTER COMPLETION OF THE SIDEWALK, DRIVEWAYS, CURB, GUTTER, AND PAVING, THE SILT FILTERS SHALL BE MODIFIED TO BURLAP SACKS FILLED WITH 3/4" DRAIN ROCK OR OTHER ACCEPTED BMP POSITIONED SURROUNDING EACH CATCH BASIN.

EROSION CONTROL NOTES:

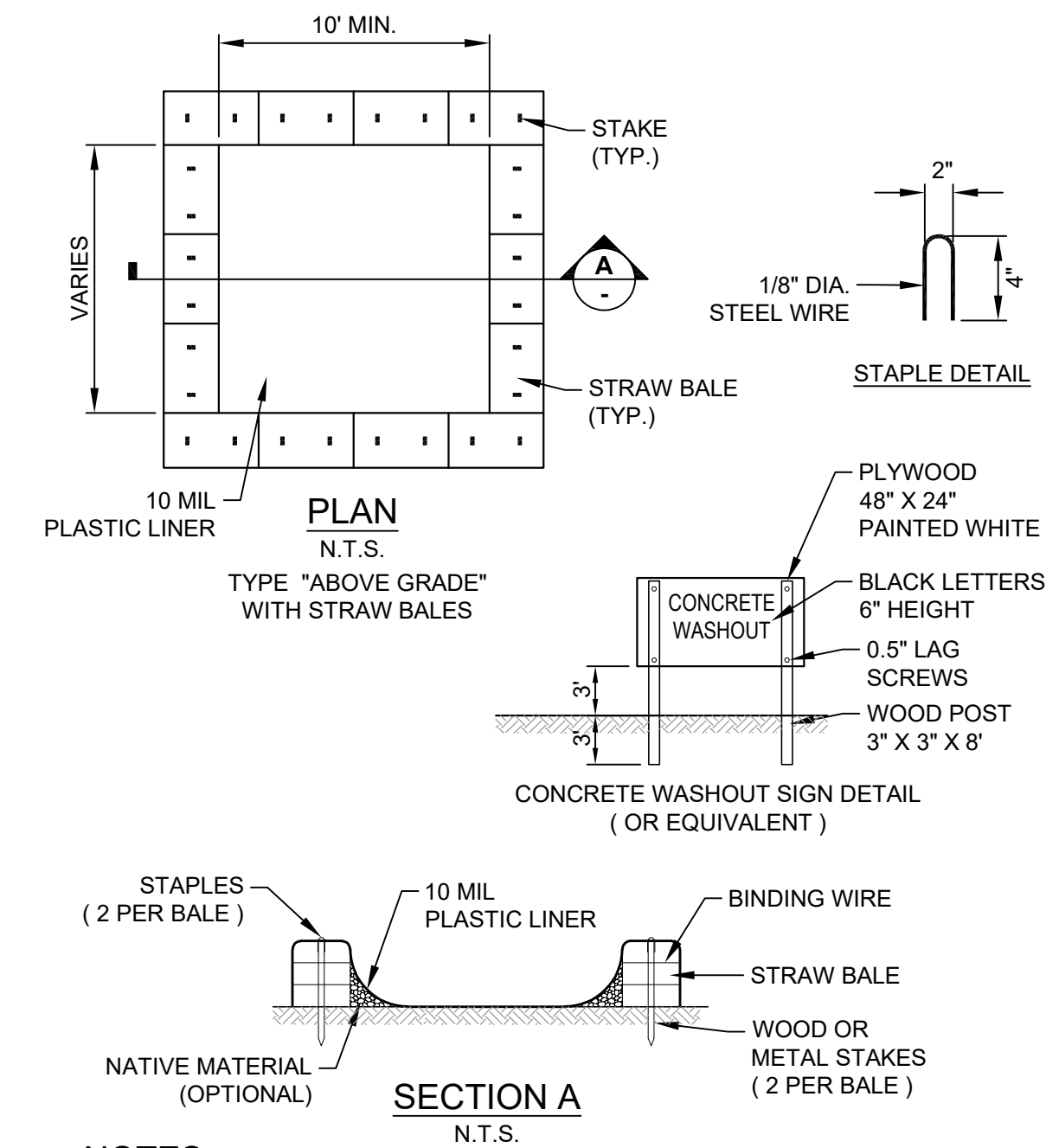
- NO VEHICLES SHALL BE ALLOWED TO TRACK OR SPREAD SOIL FROM THE CONSTRUCTION AREAS ONTO EXISTING PAVED PUBLIC STREETS.
- THE EROSION AND SEDIMENT CONTROL MEASURES WILL BE OPERABLE DURING THE RAINY SEASON, OCTOBER 1ST TO APRIL 15TH. NO GRADING WILL OCCUR BETWEEN OCTOBER 1ST AND APRIL 15TH, UNLESS AUTHORIZED BY THE CITY ENGINEER.
- DURING THE RAINY SEASON, ALL PAVED AREAS WILL BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE SITE WILL BE MAINTAINED SO THAT A MINIMUM OF SEDIMENT-LADEN RUNOFF ENTERS THE STORM DRAIN SYSTEM. THESE PLANS SHALL REMAIN IN EFFECT UNTIL THE TRACT IMPROVEMENTS ARE ACCEPTED BY THE CITY, AND ALL SLOPES ARE STABILIZED FROM EROSION.

URBAN RUNOFF POLLUTION NOTES:

- STABILIZE ALL DENUDED AREAS AND MAINTAIN EROSION CONTROL MEASURES CONTINUOUSLY FOR THE DURATION OF THE PROJECT.
- REMOVE SPOILS PROMPTLY AND AVOID STOCKPILING OF FILL MATERIALS WHEN RAIN IS FORECAST. IF RAIN THREATENS, STOCK-PILED SOILS AND OTHER MATERIALS SHALL BE TARPED, AT THE REQUEST OF THE CITY ENGINEER.
- STORE, HANDLE AND DISPOSE OF CONSTRUCTION MATERIALS AND WASTES SO AS TO PREVENT THEIR ENTRY TO THE STORM DRAIN SYSTEM. CONTRACTOR MUST NOT ALLOW CONCRETE, WASHWATERS, SLURRIES, PAINT OR OTHER MATERIALS TO ENTER CATCH BASINS OR TO ENTER SITE RUNOFF.
- USE FILTRATION OR OTHER MEASURES TO REMOVE SEDIMENT FROM DEWATERING EFFLUENT.
- NO CLEANING, FUELING OR MAINTAINING VEHICLES ON SITE SHALL BE PERMITTED IN ANY MANNER THAT ALLOWS DELETERIOUS MATERIALS TO ENTER CATCH BASINS OR TO ENTER SITE RUNOFF.
- CONTRACTOR TO RELOCATE CONCRETE WASHDOWN, VEHICLE STORAGE DELIVERY, AND NON HAZARDOUS WASTE AREAS AS NECESSARY TO FACILITATE THEIR OPERATION AND PROMOTE POLLUTION CONTROL.

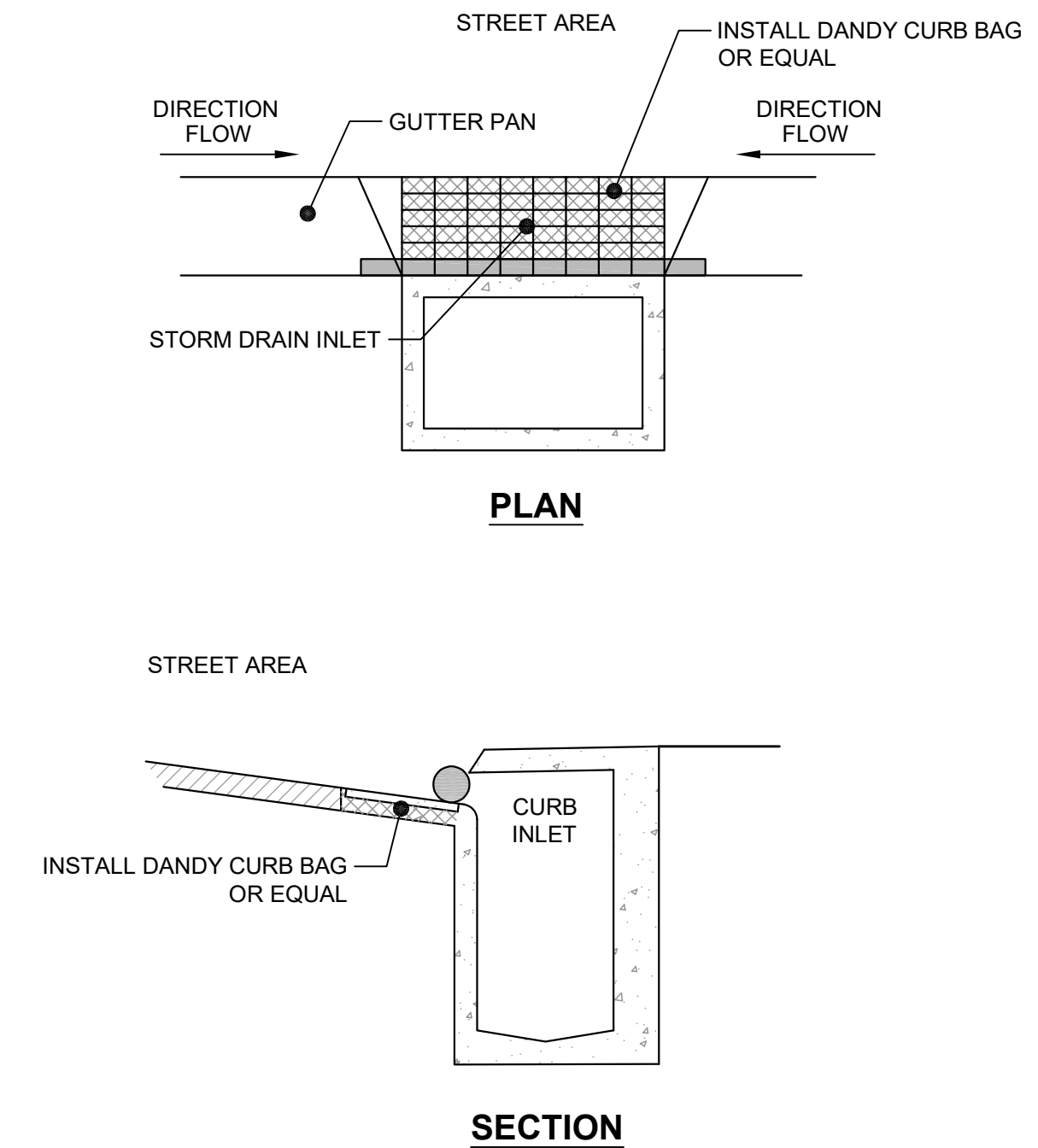
BMP IMPLEMENTATION SCHEDULE:

- BMP'S APPROPRIATE FOR THE WORK BEING DONE SHALL BE IN PLACE AT ALL TIMES.
- PERIMETER CONTROL, EXISTING INLET PROTECTION, AND CONSTRUCTION ENTRANCE SHALL BE INSTALLED PRIOR TO ANY DEMOLITION.
- ALL OTHER BMP'S SHALL BE INSTALLED AT COMPLETION OF CONSTRUCTION OF EACH INLET.

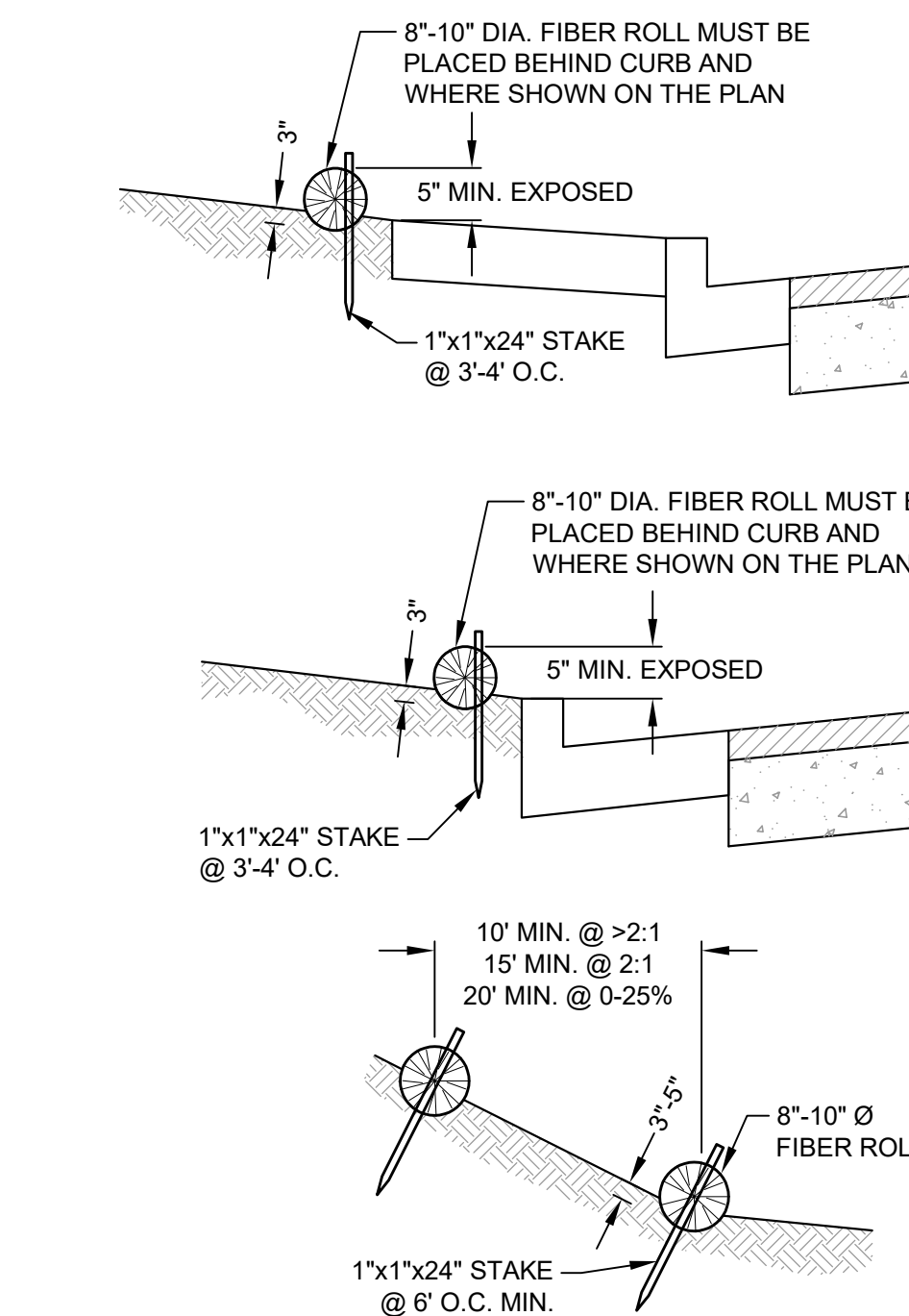


- NOTES:**
- ACTUAL LAYOUT DETERMINED IN FIELD.
 - THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FEET OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

1 TEMPORARY CONCRETE WASHOUT DETAIL
SCALE: 1" = 1'



2 INLET PROTECTION
SCALE: NTS



- NOTES:**
- FIBER ROLLS TO BE LAID ALONG CONTOUR OR AS DIRECTED BY ENGINEER.

3 FIBER ROLL INSTALLATION DETAILS
SCALE: NTS



CSW | ST2
CSW/Stuber-Stroeh Engineering Group, Inc.
 121 Park Place
 Richmond, CA 94801
 Tel: 415.883.9850
 Fax: 415.883.9835
 http://www.cswst2.com

PROJECT MANAGER: _____ DATE _____
 SURVEY CHIEF OF PARTY _____
 WATERSHED REVIEW: _____ DATE _____
 FOR REDUCED PLANS - ORIGINAL SCALE IS IN INCHES

DEPICTION OF MONUMENTS: _____ DATE _____
 SUBMITTED: _____ DATE _____
 SUPERVISING ENGINEER _____
 APPROVED: _____ DATE _____
 CITY ENGINEER _____

DESIGN: _____ JD
 DRAWN: _____ DC
 CHECK: _____ JD
 AS BUILT: _____

HORIZ.: _____
 VERT.: _____
 BOOK: _____
 DATE: 03/22/2024

CITY OF BERKELEY
 DEPARTMENT OF PUBLIC WORKS

FY 2023 RETAINING WALL AND STORM DRAIN IMPROVEMENT PROJECT
 EROSION CONTROL PLAN

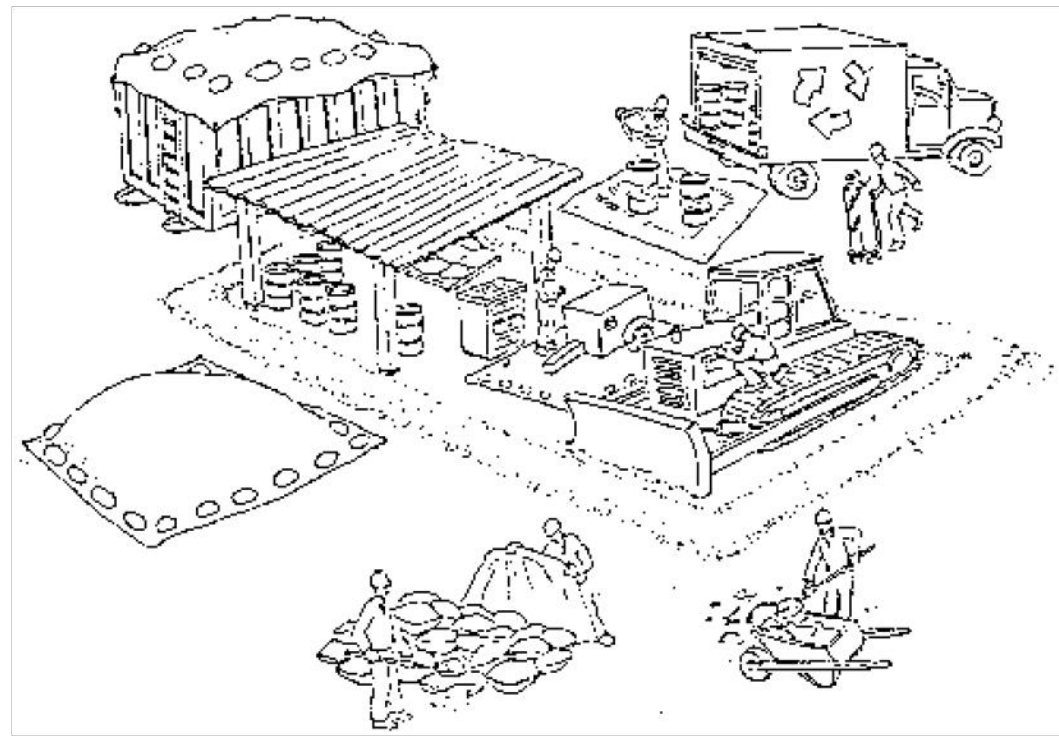
PLAN 8278
 FILE 503-636
 EC1
 SHEET 20 OF 21

REVISION	MARK	DATE	DESCRIPTION	APPROVAL

Pollution Prevention — It's Part of the Plan

Make sure your crews and subs do the job right!

Runoff from streets and other paved areas is a major source of pollution in San Francisco Bay. Construction activities can directly affect the health of the Bay unless contractors and crews plan ahead to keep dirt, debris, and other construction waste away from storm drains and local creeks. Following these guidelines will ensure your compliance with local ordinance requirements.



Materials storage & spill cleanup

Non-hazardous materials management

- ✓ Sand, dirt, and similar materials must be stored at least 10 feet from catch basins, and covered with a tarp during wet weather or when rain is forecast.
- ✓ Use (but don't overuse) reclaimed water for dust control as needed.
- ✓ Sweep streets and other paved areas daily. Do not wash down streets or work areas with water!
- ✓ Recycle all asphalt, concrete, and aggregate base material from demolition activities.
- ✓ Check dumpsters regularly for leaks and to make sure they don't overflow. Repair or replace leaking dumpsters promptly.

Hazardous materials management

- ✓ Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with city, state, and federal regulations.
- ✓ Store hazardous materials and wastes in secondary containment and cover them during wet weather.
- ✓ Follow manufacturer's application instructions for hazardous materials and be careful not to use more than necessary. Do not apply chemicals outdoors when rain is forecast within 24 hours.
- ✓ Be sure to arrange for appropriate disposal of all hazardous wastes.

Spill prevention and control

- ✓ Keep a stockpile of spill cleanup materials (rags, absorbents, etc.) available at the construction site at all times.
- ✓ When spills or leaks occur, contain them immediately and be particularly careful to prevent leaks and spills from reaching the gutter, street, or storm drain. Never wash spilled material into a gutter, street, storm drain, or creek!
- ✓ Report any hazardous materials spills immediately! Dial 911 or your local emergency response number.

Vehicle and equipment maintenance & cleaning

- ✓ Inspect vehicles and equipment for leaks frequently. Use drip pans to catch leaks until repairs are made; repair leaks promptly.
- ✓ Fuel and maintain vehicles on site only in a bermed area or over a drip pan that is big enough to prevent runoff.
- ✓ If you must clean vehicles or equipment on site, clean with water only in a bermed area that will not allow rinsewater to run into gutters, streets, storm drains, or creeks.
- ✓ Do not clean vehicles or equipment on-site using soaps, solvents, degreasers, steam cleaning equipment, etc.



Dewatering operations

- ✓ Reuse water for dust control, irrigation, or another on-site purpose to the greatest extent possible.
- ✓ Be sure to call your city's storm drain inspector before discharging water to a street, gutter, or storm drain. Filtration or diversion through a basin, tank, or sediment trap may be required.
- ✓ In areas of known contamination, testing is required prior to reuse or discharge of groundwater. Consult with the city inspector to determine what testing to do and to interpret results. Contaminated groundwater must be treated or hauled off-site for proper disposal.



Saw cutting

- ✓ Always completely cover or barricade storm drain inlets when saw cutting. Use filter fabric, catch basin inlet filters, or sand/gravel bags to keep slurry out of the storm drain system.
- ✓ Shovel, absorb, or vacuum saw-cut slurry and pick up all waste as soon as you are finished in one location or at the end of each work day (whichever is sooner!).
- ✓ If saw cut slurry enters a catch basin, clean it up immediately.

Concrete, grout, and mortar storage & waste disposal

- ✓ Be sure to store concrete, grout, and mortar under cover and away from drainage areas. These materials must never reach a storm drain.
- ✓ Wash out concrete equipment/trucks off-site or designate an on-site area for washing where water will flow onto dirt or into a temporary pit in a dirt area. Let the water seep into the soil and dispose of hardened concrete with trash.



- ✓ Divert water from washing exposed aggregate concrete to a dirt area where it will not run into a gutter, street, or storm drain.
- ✓ If a suitable dirt area is not available, collect the wash water and remove it for appropriate disposal off site.

Earthwork & contaminated soils

- ✓ Keep excavated soil on the site where it is least likely to collect in the street. Transfer to dump trucks should take place on the site, not in the street.
- ✓ Use fiber rolls, silt fences, or other control measures to minimize the flow of silt off the site.



- ✓ Avoid scheduling earth moving activities during the rainy season if possible. If grading activities during wet weather are allowed in your permit, be sure to implement all control measures necessary to prevent erosion.
- ✓ Mature vegetation is the best form of erosion control. Minimize disturbance to existing vegetation whenever possible.
- ✓ If you disturb a slope during construction, prevent erosion by securing the soil with erosion control fabric, or seed with fast-growing grasses as soon as possible. Place fiber rolls down-slope until soil is secure.

- ✓ If you suspect contamination (from site history, discoloration, odor, texture, abandoned underground tanks or pipes, or buried debris), call the Regional Water Quality Control Board or local hazardous waste management agency for help in determining what testing should be done, and manage disposal of contaminated soil according to their instructions.

Paving/asphalt work



- ✓ Do not pave during wet weather or when rain is forecast.
- ✓ Always cover storm drain inlets and man-holes when paving or applying seal coat, tack coat, slurry seal, or fog seal.
- ✓ Place drip pans or absorbent material under paving equipment when not in use.
- ✓ Protect gutters, ditches, and drainage courses with sand/gravel bags, or earthen berms.
- ✓ Do not sweep or wash down excess sand from sand sealing into gutters, storm drains, or creeks. Collect sand and return it to the stockpile, or dispose of it as trash.
- ✓ Do not use water to wash down fresh asphalt concrete pavement.

Painting



- ✓ Never rinse paint brushes or materials in a gutter or street!
- ✓ Paint out excess water-based paint before rinsing brushes, rollers, or containers in a sink. If you can't use a sink, direct wash water to a dirt area and spade it in.
- ✓ Paint out excess oil-based paint before cleaning brushes in thinner.
- ✓ Filter paint thinners and solvents for reuse whenever possible. Dispose of oil-based paint sludge and unusable thinner as hazardous waste.

