

WARNING: ALL INDIVIDUALS INTERESTED IN BIDDING ON THIS PROJECT MUST OBTAIN THE FINAL PLANS AND SPECIFICATIONS FROM THE DEPARTMENT MANAGING THE PROJECT OR AS OTHERWISE STATED IN THE ADVERTISEMENT FOR BIDS FOR THE PROJECT. DO NOT USE THE PLANS AND SPECIFICATIONS POSTED ON THE CLERK OF THE BOARD'S WEBSITE FOR BIDDING ON THIS PROJECT.

GRADING AND IMPROVEMENT NOTES

1. ALL IMPROVEMENTS SHALL BE COMPLETED IN ACCORDANCE WITH THIS PLAN AND COMPLY WITH THE LATEST SAN BERNARDINO COUNTY ROAD PLANNING AND DESIGN STANDARDS MANUAL AS WELL AS THE SAN BERNARDINO COUNTY STANDARDS AND SPECIFICATIONS, THE SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS GENERAL PERMIT CONDITIONS AND TRENCH SPECIFICATIONS, AND THE STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION AND THE STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION.
2. APPROVAL OF THIS PLAN BY THE COUNTY OF SAN BERNARDINO DOES NOT CONSTITUTE A REPRESENTATION AS TO THE ACCURACY OF THE LOCATION OR OF THE EXISTENCE OR NON-EXISTENCE OF ANY UNDERGROUND UTILITY PIPE OR STRUCTURE WITHIN THE LIMITS OF THIS PROJECT. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THE PROTECTION OF ALL UTILITIES WITHIN THE LIMITS OF THIS PROJECT.
3. PROPOSED STARTING DATE TBD AND COMPLETION DATE OF TBD GRADING.
4. DUST SHALL BE CONTROLLED BY WATERING.
5. FINISH GRADING WILL BE COMPLETED AND APPROVED BEFORE OCCUPANCY OF BUILDINGS.
6. PUBLIC STREETS SHALL BE KEPT CLEAN AND FREE FROM DIRT AND/OR DEBRIS. THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS INCURRED IN STREET CLEANING NECESSITATED BY HIS OPERATION.
7. THE FACE OF ALL CUT AND FILL SLOPES SHALL BE PLANTED WITH A GROUND COVER APPROVED BY THE COUNTY ENGINEER.
8. NO GRADING IN EXCESS OF 5000 CU. YDS. SHALL BE STARTED WITHOUT FIRST NOTIFYING THE ENGINEER. A PRE-GRADING MEETING AT THE SITE IS REQUIRED BEFORE START OF GRADING WITH THE FOLLOWING PEOPLE PRESENT: OWNER, GRADING CONTRACTOR, SUPERVISING CIVIL ENGINEER, SOILS ENGINEER AND/OR GEOLOGIST, COUNTY CONSTRUCTION INSPECTORS OR THEIR REPRESENTATIVES.
9. THE PERMITTEE OR HIS AGENT SHALL NOTIFY THE COUNTY OF SAN BERNARDINO WHEN THE GRADING OPERATION (EXCEEDING 5000 CU. YDS.) IS READY FOR REQUIRED INSPECTIONS AS SHOWN IN THE TESTING AND INSPECTION REQUIREMENTS OF DIVISION V.
10. NO FILL TO BE PLACED UNTIL STRIPPING OF VEGETATION, REMOVAL OF UNSUITABLE SOILS AND INSTALLATION OF SUBDRAINS. IF ANY, HAS BEEN INSPECTED AND APPROVED BY THE SOILS ENGINEER.
11. NO ROCK OR SIMILAR MATERIAL GREATER THAN 8" IN DIAMETER WILL BE PLACED IN THE FILL UNLESS RECOMMENDATIONS FOR SUCH PLACEMENT HAVING BEEN SUBMITTED BY THE SOILS ENGINEER IN ADVANCE AND APPROVED BY THE BUILDING OFFICIAL.
12. ALL EXISTING FILLS SHALL BE APPROVED BY THE COUNTY DEPARTMENT OF PUBLIC WORKS OR REMOVED BEFORE ANY ADDITIONAL FILLS ARE ADDED.
13. FILLS SHALL BE BENCHED IN COMPETENT MATERIAL AS REQUIRED IN SOILS REPORT. AREAS TO RECEIVE FILL SHALL BE PROPERLY PREPARED AND APPROVED BY THE COUNTY DEPARTMENT OF PUBLIC WORKS AND SAILS ENGINEER PRIOR TO THE PLACING OF FILL.
14. PRIOR TO ISSUANCE OF BUILDING PERMITS, SUBMIT A SOILS ENGINEER'S REPORT ON THE EXPANSION PROPERTIES OF SOIL AS SUCH SOILS ARE DEFINED BY BUILDING CODE SECTION 2904(B) ON ALL BUILDING SITES IN THE PROPOSED SUBDIVISION.
15. IF ANY DEVELOPMENT IS SCHEDULED TO BE DONE BETWEEN OCTOBER 15, AND APRIL 15, THE ENGINEER SHALL SUBMIT A DETAILED EROSION CONTROL PLAN INCLUDING DESILTING BASINS OR OTHER TEMPORARY DRAINAGE OR CONTROL MEASURES, OR BOTH, AS MAY BE NECESSARY TO PROTECT ADJOINING PUBLIC AND PRIVATE PROPERTY FROM DAMAGE BY EROSION, FLOODING OR THE DEPOSITION OF MUD OR DEBRIS WHICH MAY ORIGINATE FROM THE SITE OR RESULT FROM SUCH DEVELOPMENT.
16. THE PERMITTEE SHALL COMPLY WITH THE GRADING CODE REQUIREMENTS WHEN AN EXCESS OF 1000 CUBIC YARDS IS MOVED ON PUBLIC ROADWAYS FROM THE SITE OF AN EARTH GRADING OPERATION. (15.04-210, 5.04.545, 15.38)
17. SLOPES IN EXCESS OF 15 FEET MUST BE PROVIDED WITH AN APPROVED IRRIGATION SYSTEM.
18. THE SOILS ENGINEER SHALL BE RESPONSIBLE FOR THE PROFESSIONAL INSPECTION AND APPROVAL CONCERNING THE PREPARATION OF GROUND TO RECEIVE FILLS, TESTING FOR REQUIRED COMPACTION, STABILITY OF ALL FINISH SLOPES AND THE DESIGN OF BUTTRESS FILLS, WHERE REQUIRED, INCORPORATING DATA SUPPLIED BY THE ENGINEERING GEOLOGIST AND INSURE COMPLIANCE WITH THE PLANS, SPECIFICATIONS, AND CODE WITHIN THEIR PURVIEW.
19. THE DESIGN CIVIL ENGINEER SHALL EXERCISE SUFFICIENT SUPERVISORY CONTROL DURING GRADING AND CONSTRUCTION TO INSURE COMPLIANCE WITH THE PLANS, SPECIFICATIONS, AND CODE WITHIN HIS PURVIEW.
20. WHERE SUPPORT OF BUTTRESSING OF CUT AND NATURAL SLOPES IS DETERMINED TO BE NECESSARY BY THE SOILS ENGINEER AND/OR GEOLOGIST, THE SOILS ENGINEER WILL SUBMIT DESIGN, LOCATION AND CALCULATIONS TO THE COUNTY PRIOR TO CONSTRUCTION. THE SOILS ENGINEER AND/OR GEOLOGIST WILL INSPECT AND CONTROL THE CONSTRUCTION OF THE BUTTRESSING AND CERTIFY APPROVAL TO THE STABILITY OF THE SLOPE AND ADJACENT STRUCTURES UPON COMPLETION.
21. SANITARY FACILITIES SHALL BE MAINTAINED ON THE SITE.
22. THE LOCATION AND PROTECTION OF ALL UTILITIES IS THE RESPONSIBILITY OF THE PERMITTEE. (ANY OTHER NOTES REQUIRED TO ADDRESS SPECIAL CIRCUMSTANCES OR CONDITIONS OF THE PROJECT)

PRIVATE ENGINEER'S NOTE TO CONTRACTOR

THE CONTRACTOR IS RESPONSIBLE TO LOCATE ANY EXISTING UNDERGROUND UTILITIES BEFORE COMMENCING ANY WORK. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE EXISTING UTILITIES. THE CONTRACTOR FURTHER ASSUMES ALL LIABILITY AND RESPONSIBILITY FOR THE EXISTING UTILITY PIPES, CONDUITS OR STRUCTURES.

CONTRACTOR AGREES THAT HE/SHE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE COUNTY OF SAN BERNARDINO, THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

OWNER:

SAN BERNARDINO COUNTY -
REAL ESTATE SERVICES
385 N. ARROWHEAD AVE., 3RD FL.
SAN BERNARDINO, CA 92415-0180
TEL: (909) 387-5252

CIVIL ENGINEER:

MICHAEL BAKER INTERNATIONAL
5 HUTTON CENTRE, SUITE 500
SANTA ANA, CA 92660
TEL: (949) 472-3505

SOIL ENGINEER:

GEOTEK, INC.
1548 NORTH MAPLE STREET
CORONA, CA 92880
TEL: (951) 710-1160

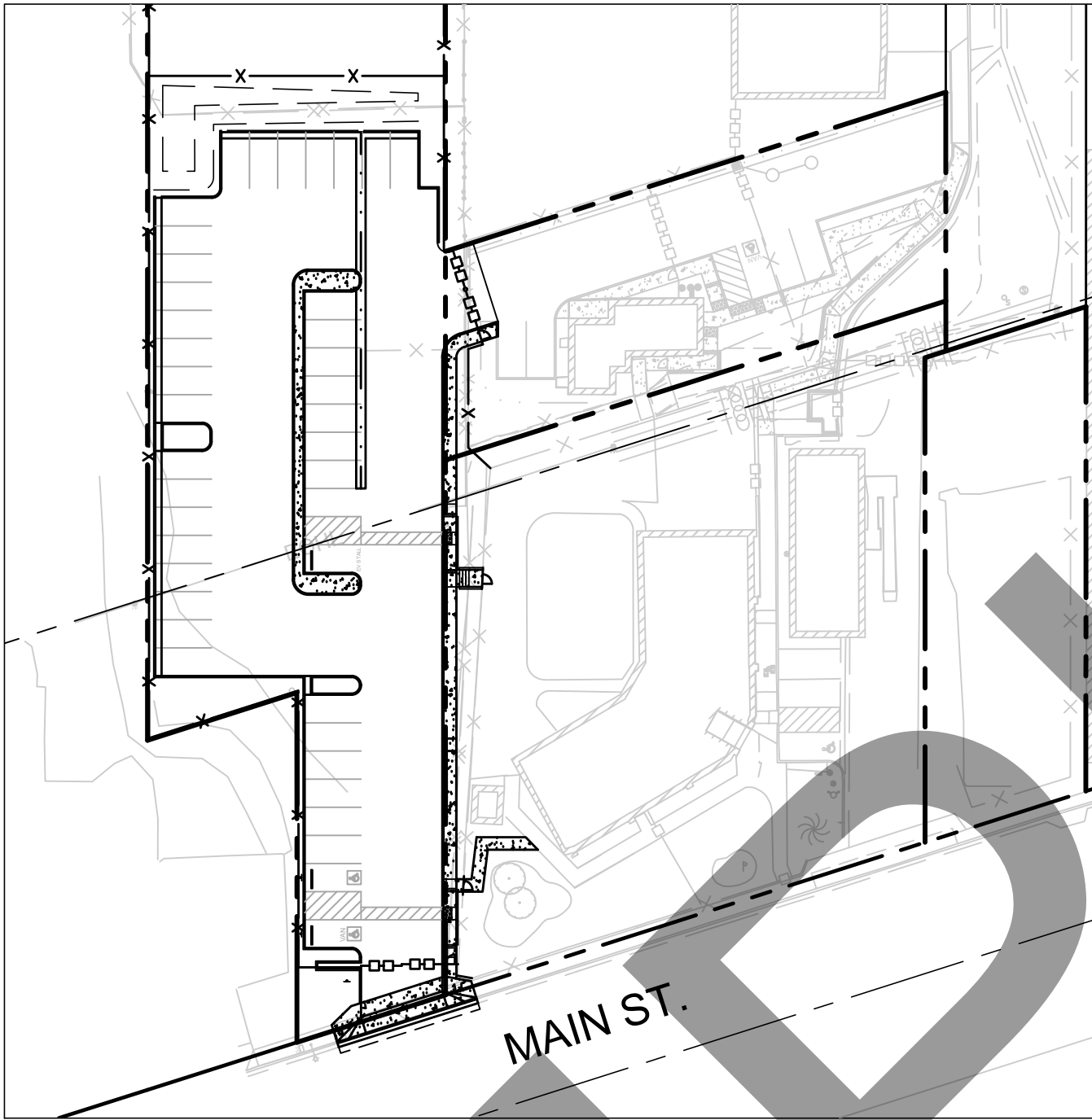
LIGHTING ENGINEER:

THE ENGINEERING PARTNERS, INC.
10150 MEANLEY DR., SUITE 200
SAN DIEGO, CA 92131
TEL: (858) 824-1761

GRADING AND IMPROVEMENT PLAN

10.10.1133 - BARSTOW PRESCHOOL RENOVATIONS

SAN BERNARDINO COUNTY



INDEX MAP
N.T.S.

DEMOLITION NOTES

- 1] PROTECT IN PLACE. ITEM AS NOTED
- 2] SAWCUT AND REMOVE EXISTING PAVEMENT TO ALLOW FOR SMOOTH TRANSITION TO NEW PAVEMENT
- 3] DEMOLISH AND REMOVE EXISTING CONCRETE SIDEWALK
- 4] DEMOLISH AND REMOVE EXISTING FENCE
- 5] DEMOLISH AND REMOVE EXISTING BUILDING
- 6] REMOVE AND REPLAC EXISTING WATER METER

EARTHWORK QUANTITIES

CATEGORY	CUT(CY)	FILL(CY)
GENERAL SITE (RAW)	246	155
SHRINKAGE (10%)		16
TOTAL	246	171
NET EXPORT	75 CY	

SITE PARKING INFORMATION

SITE PARKING:
STANDARD= 37 STALLS
HANDICAP= 2 STALLS (1 VAN ACCESSIBLE)
EV STALL= 1 STALL
TOTAL= 40 STALLS

UTILITY CONTACTS:

GOLDEN STATE WATER COMPANY
1521 E. MAIN ST.
BARSTOW, CA 92311
(909) 394-2272

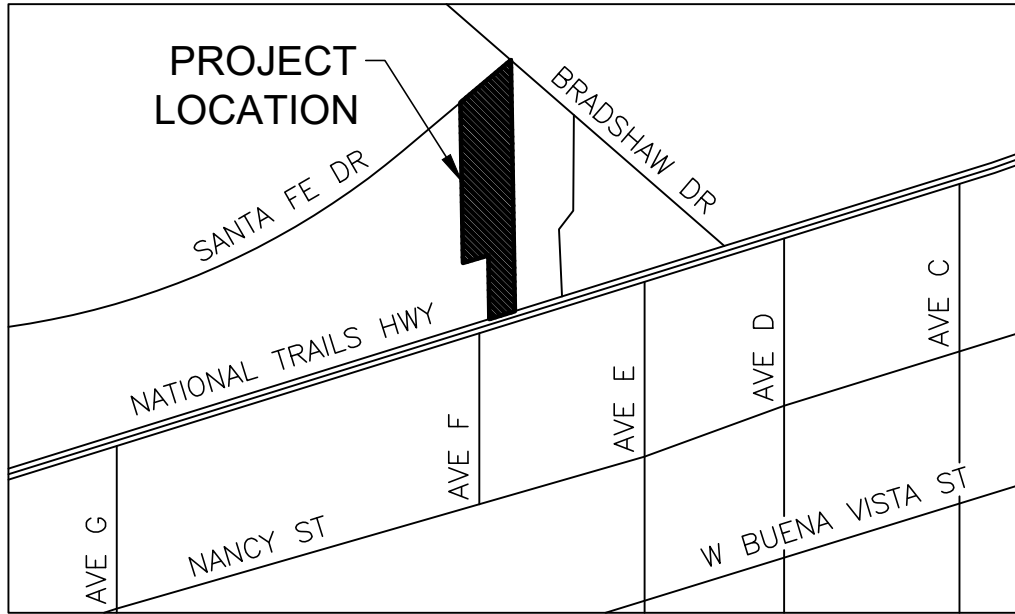
CITY OF BARSTOW SEWER
220 E. MOUNTAIN VIEW ST.
BARSTOW, CA 92311
(760) 256-3531

SOUTHERN CALIFORNIA EDISON COMPANY
1351 E. FRANCIS
ONTARIO, CALIFORNIA 91761
VAL ROSALES (909) 930-8483

VERIZON
PO BOX 660108
DALLAS, TX 75266-0108
(888) 378-3113

SOUTHERN CALIFORNIA GAS COMPANY
1981 WEST LUGONIA AVENUE
REDLANDS, CALIFORNIA 92737
GERI LEE (909) 335-7507

TIME WARNER CABLE
512 E. VIRGINIA WAY
BARSTOW, CA 92311
(888) 406-7063



VICINITY MAP
NOT TO SCALE

LEGEND:

PROPERTY LINE	---
TOP/TOE OF SLOPE	---
RETAINING WALL	█
EXISTING FENCE	---
PROPOSED FENCE	---
EXISTING GATE	---
PROPOSED GATE	---
FLOWLINE	---
CONCRETE PAVEMENT	█
ASPHALT PAVEMENT	█
ACCESSIBLE STRIPING AREA	█

ABBREVIATIONS

AC	ASPHALT CONCRETE
CF	CURB FACE
@	CENTERLINE
CO	CLEAN OUT
CY	CUBIC YARDS
D/L	DAY LIGHT
EA	EACH
ELEV	ELEVATION
EP	EDGE OF PAVEMENT
ESMT	EASEMENT
EX.	EXISTING
()	EXISTING ELEVATION
FF	FINISH FLOOR
FG	FINISH GROUND
FH	FIRE HYDRANT
FL	FLOWLINE
FS	FINISH SURFACE
GB	GRADE BREAK
HP	HIGH POINT
INV	INVERT
LF	LINEAR FEET
LIP	LIP OF GUTTER
MH	MANHOLE
PAD	PAD ELEVATION
PL	PROPERTY LINE
R/W	RIGHT OF WAY
SD	STORM DRAIN
SF	SQUARE FEET
SW	SIDEWALK
ST	STREET
TC	TOP OF CURB
TOP	TOP OF SLOPE
TW	TOP OF WALL
WT	WATER

SHEET INDEX

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C2.0	DETAILS SHEET
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C4.0	PRECISE GRADING PLAN
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L2.0	PLANTING LEGEND, NOTES, AND DETAILS
L3.0	IRRIGATION PLAN
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E3.1	TITLE 24 CALCULATIONS
E3.2	TITLE 24 CALCULATIONS



BENCHMARK:
ELEVATIONS AS SHOWN HEREON ARE IN TERMS OF THE NORTH AMERICAN VERTICAL DATUM OF 1988 BASED LOCALLY UPON THE FOLLOWING NGS BENCH MARKS:
NAME: P710
NAVD 88 ELEV. (FT) ACCURACY: 2.958,41

PREPARED BY:
Michael Baker
5 HUTTON CENTRE DR.
SUITE 500
SANTA ANA, CA 92707
PHONE: (949) 472-3505
MBAKERINTL.COM

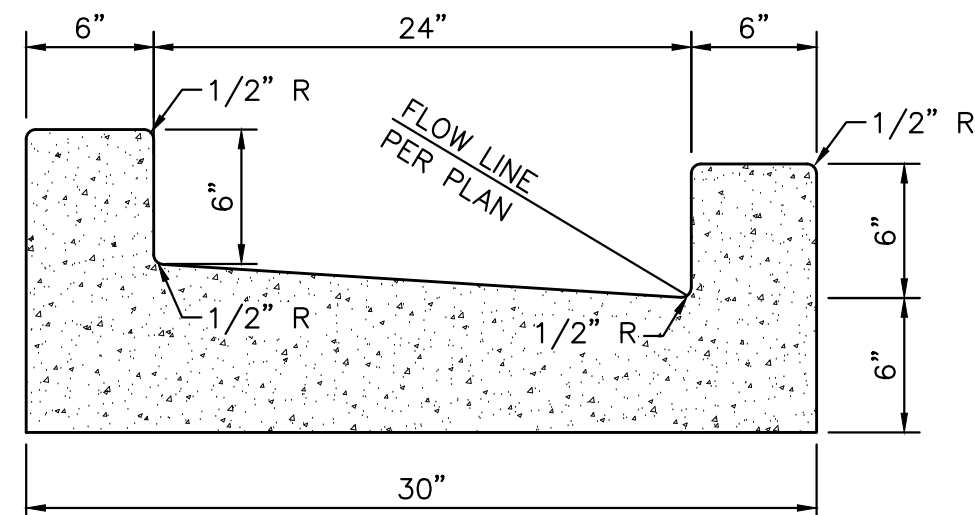
4/6/2021
BID SET

MARK	REVISIONS	APPR	DATE

COUNTY OF SAN BERNARDINO
REAL ESTATE SERVICES DEPARTMENT -
PROJECT MANAGEMENT DIVISION

TITLE SHEET
BARSTOW PARKING LOT
PROJECT # 10.10.1133
COUNTY OF SAN BERNARDINO

ROAD NO.
FILE NO.
SHEET C1.0



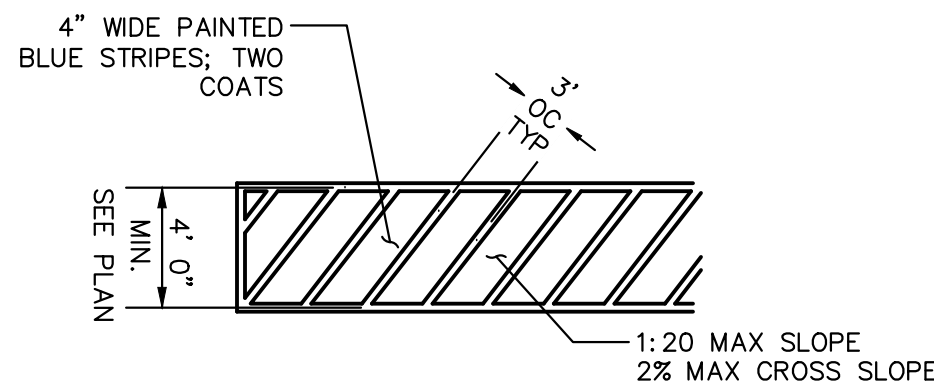
NOTES:

1. CONCRETE SHALL BE 3000 PSI.
2. ISOLATION JOINTS SHALL BE PLACED ONLY AS SPECIFIED
3. CONTRACTION JOINTS CONSISTING OF 1" DEEP SCORES SHALL BE PLACED AT 15' INTERVALS O.C.
4. WHERE A WALK IS ADJACENT TO THE CURB THE JOINTS SHALL ALIGN WITH JOINTS IN THE WALK.

DOUBLE CURB CHANNEL

N.T.S.

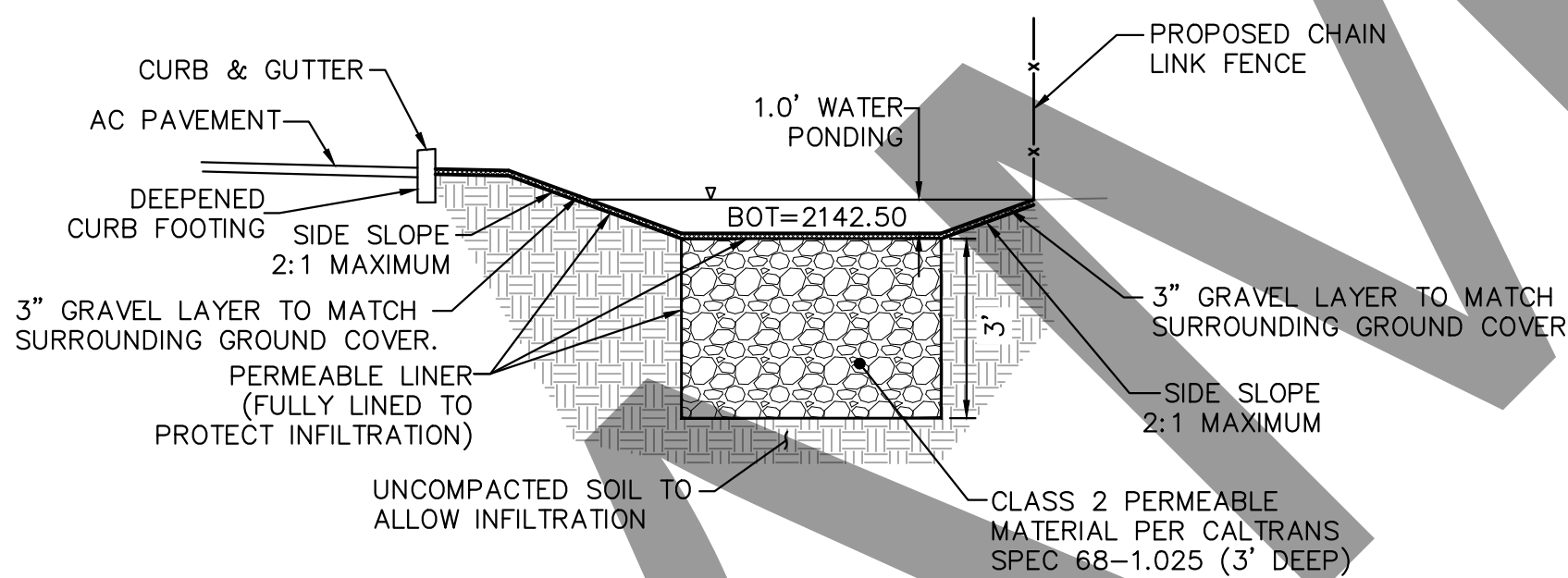
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ACCESSIBLE PATH OF TRAVEL

N.T.S.

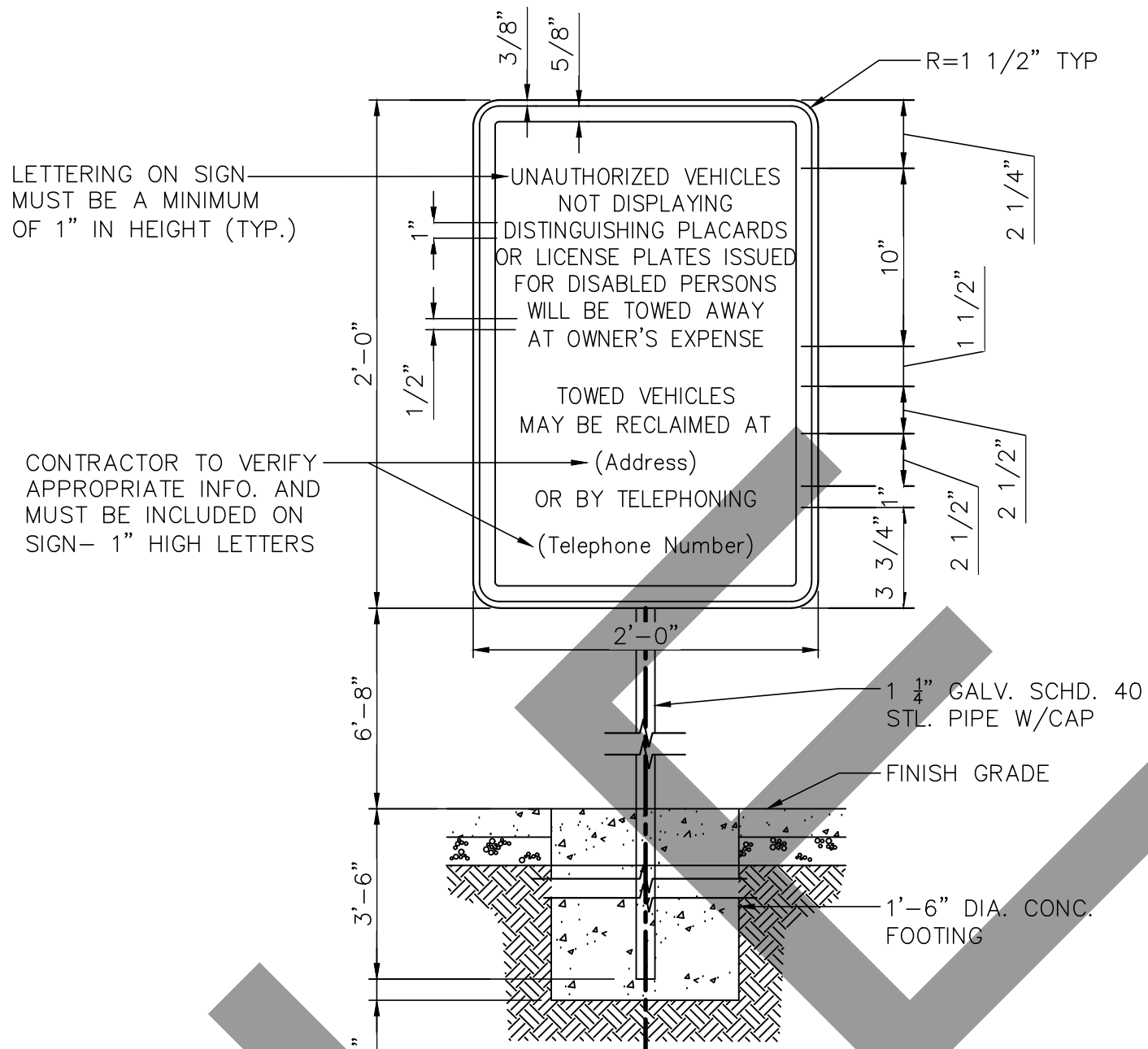
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INFILTRATION BASIN

N.T.S.

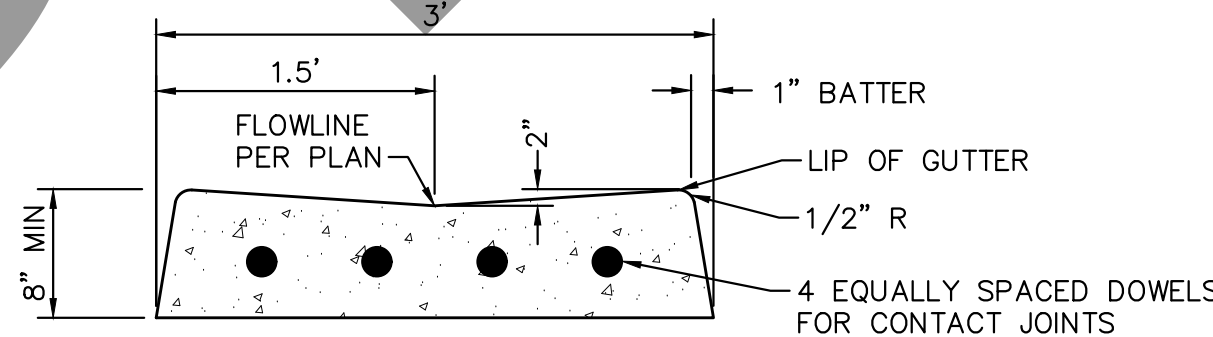
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"UNAUTHORIZED PARKING" SIGN

N.T.S.

4



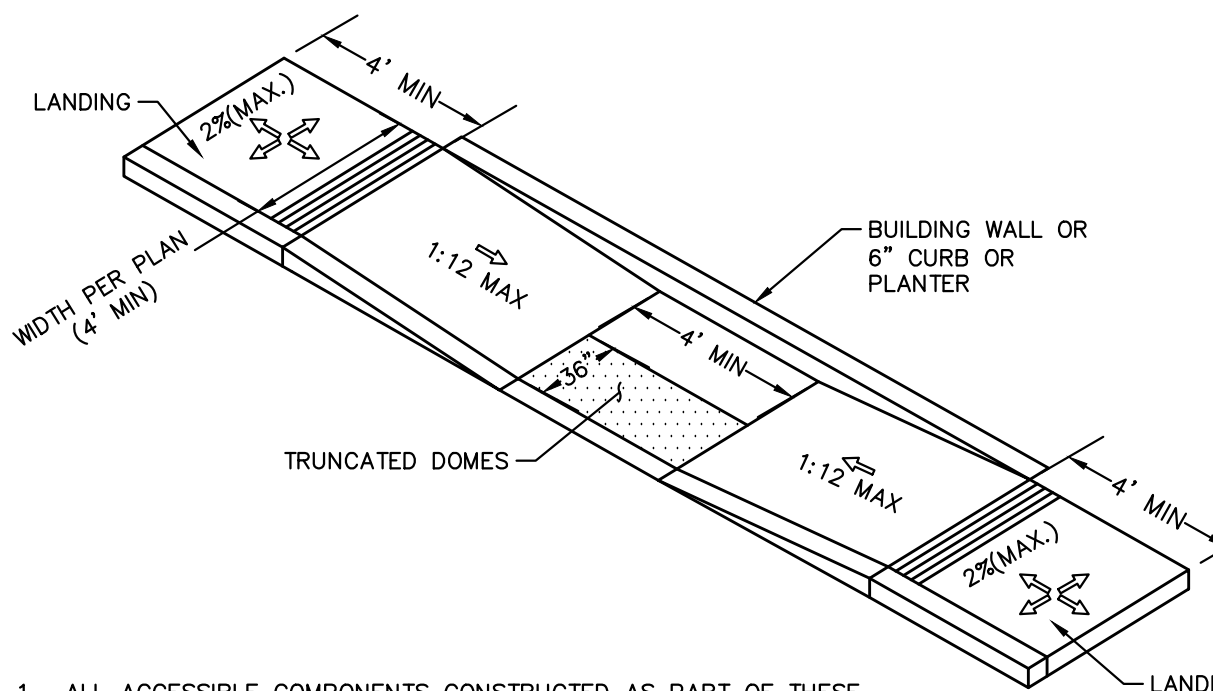
NOTES:

1. CONCRETE STRENGTH PER GEOTECH RECOMMENDATIONS OR SPPWC SPECIFICATIONS
2. TRAVERSE WEAKENED PLANE JOINTS @ 20' O.C.

3' WIDE VALLEY GUTTER

N.T.S.

5

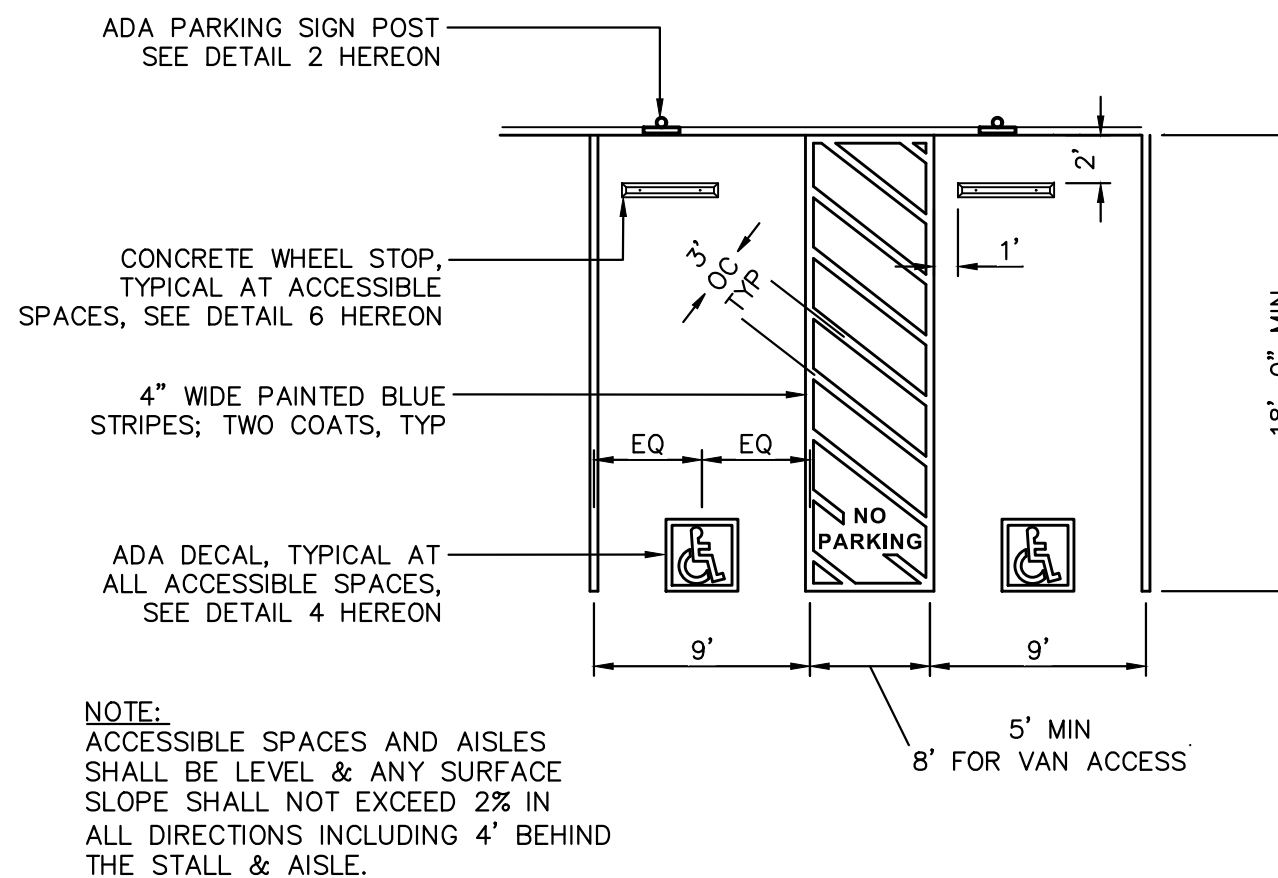


1. ALL ACCESSIBLE COMPONENTS CONSTRUCTED AS PART OF THESE PLANS SHALL COMPLY WITH THE LOCAL, STATE, AND FEDERAL REGULATIONS WHICHEVER ARE MORE STRINGENT.
2. CURB RAMPS SHALL HAVE A TRUNCATED DOMES WARNING EXTENDING THE FULL WIDTH OF THE CURB RAMP AND 3' DEEP.
3. FLUSH CURBS SHALL HAVE TRUNCATED DOMES EXTENDING 36" DEEP WHEN ADJACENT TO A TRAVEL SURFACE.
4. CURB RAMP SURFACES (FLARES AND RAMP) SHALL HAVE A DIFFERENT TEXTURE FROM THE SURROUNDING PAVEMENT.
5. TOOLED JOINT - PROVIDE 1' OF 1/4" DEEP GROVES WITH 1/4" RADIUS EDGES AT THE LEVEL SURFACE AT THE TOP OF THE RAMP, GROVES SHALL NOT EXTEND TO BOTTOM CURB OR GUTTER.
6. WATER PONDING WITHIN THE CURB RAMP LIMITS IS NOT ALLOWED.
7. NO GRADE BREAK IS ALLOWED ALONG THE RAMP SURFACE.
8. CROSS SLOPE OF THE CURB RAMP SURFACE SHALL BE LESS THAN 2%.

3' WIDE VALLEY GUTTER

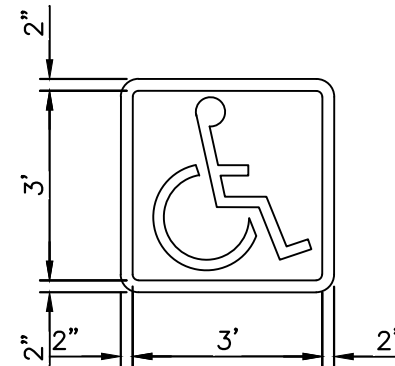
N.T.S.

6



NOTE:
ACCESSIBLE SPACES AND AISLES SHALL BE LEVEL & ANY SURFACE SLOPE SHALL NOT EXCEED 2% IN ALL DIRECTIONS INCLUDING 4' BEHIND THE STALL & AISLE.

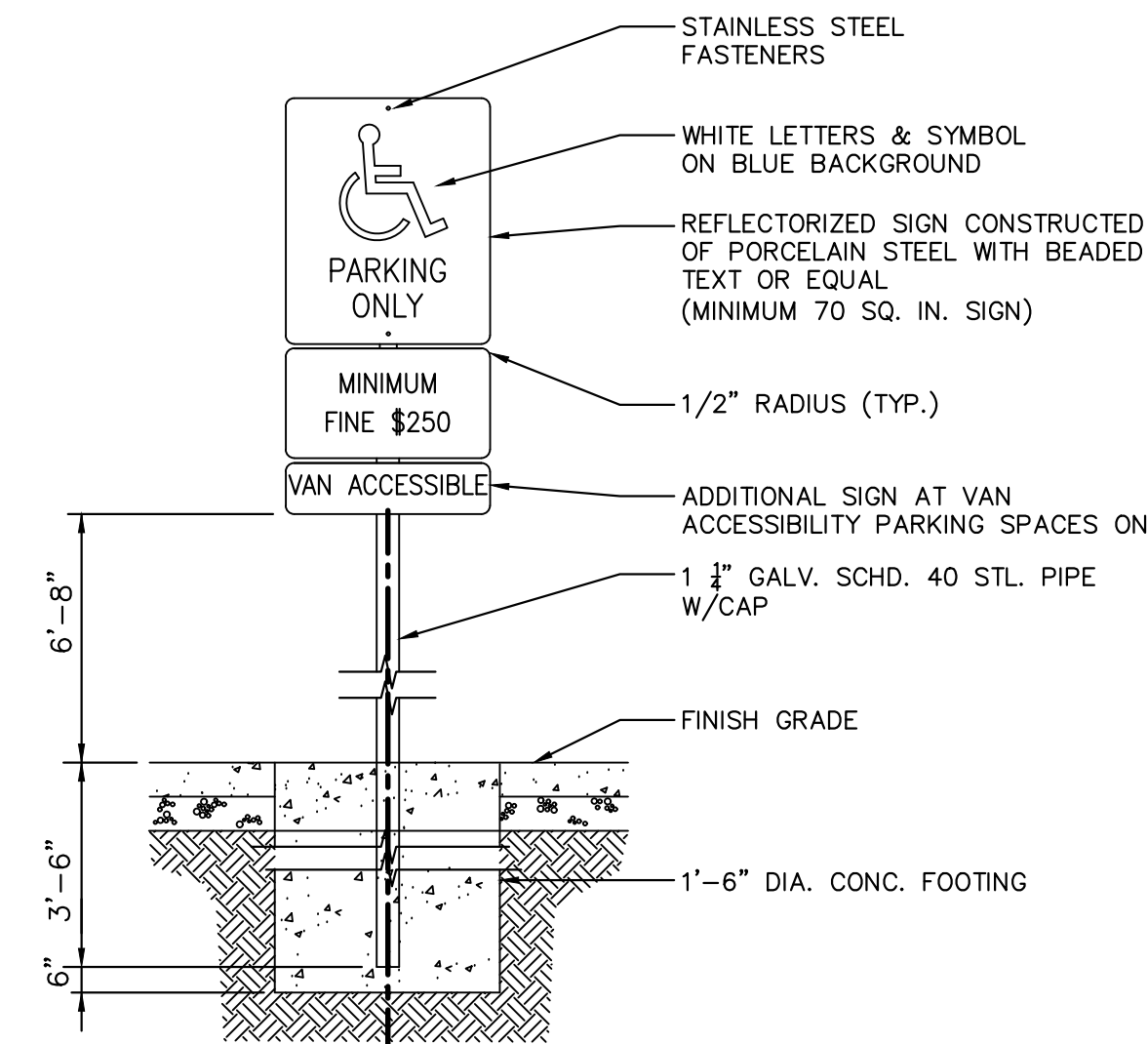
- NOTES:
1. ALL STROKES TO BE 2" WIDE.
 2. PROVIDE TWO COATS OF PAINT.
 3. BLUE BACKGROUND WITH WHITE SYMBOL.
 4. LOCATE SYMBOL AT CENTER OF STALL WHERE SHOWN ON SITE PLAN.
 5. ONE SYMBOL FOR EACH DISABLED PARKING SPACE.



ACCESSIBLE PAVEMENT MARKING

N.T.S.

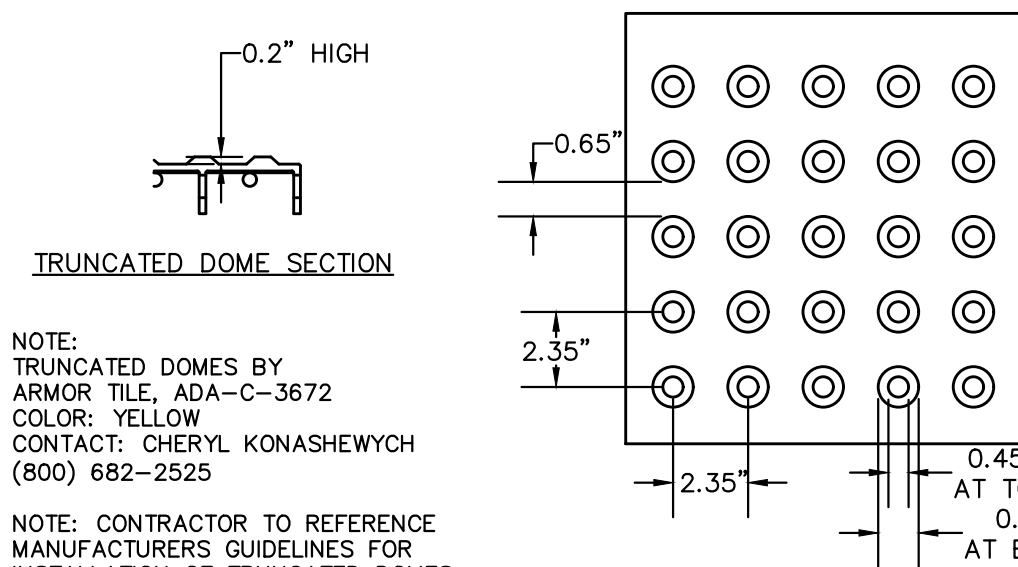
1



ADA PARKING STALL SIGN

N.T.S.

2



TRUNCATED DOMES

N.T.S.

3

811
Know what's below.
Call before you dig.
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

DIAL TOLL FREE
8 1 1
AT LEAST TWO DAYS BEFORE YOU DIG

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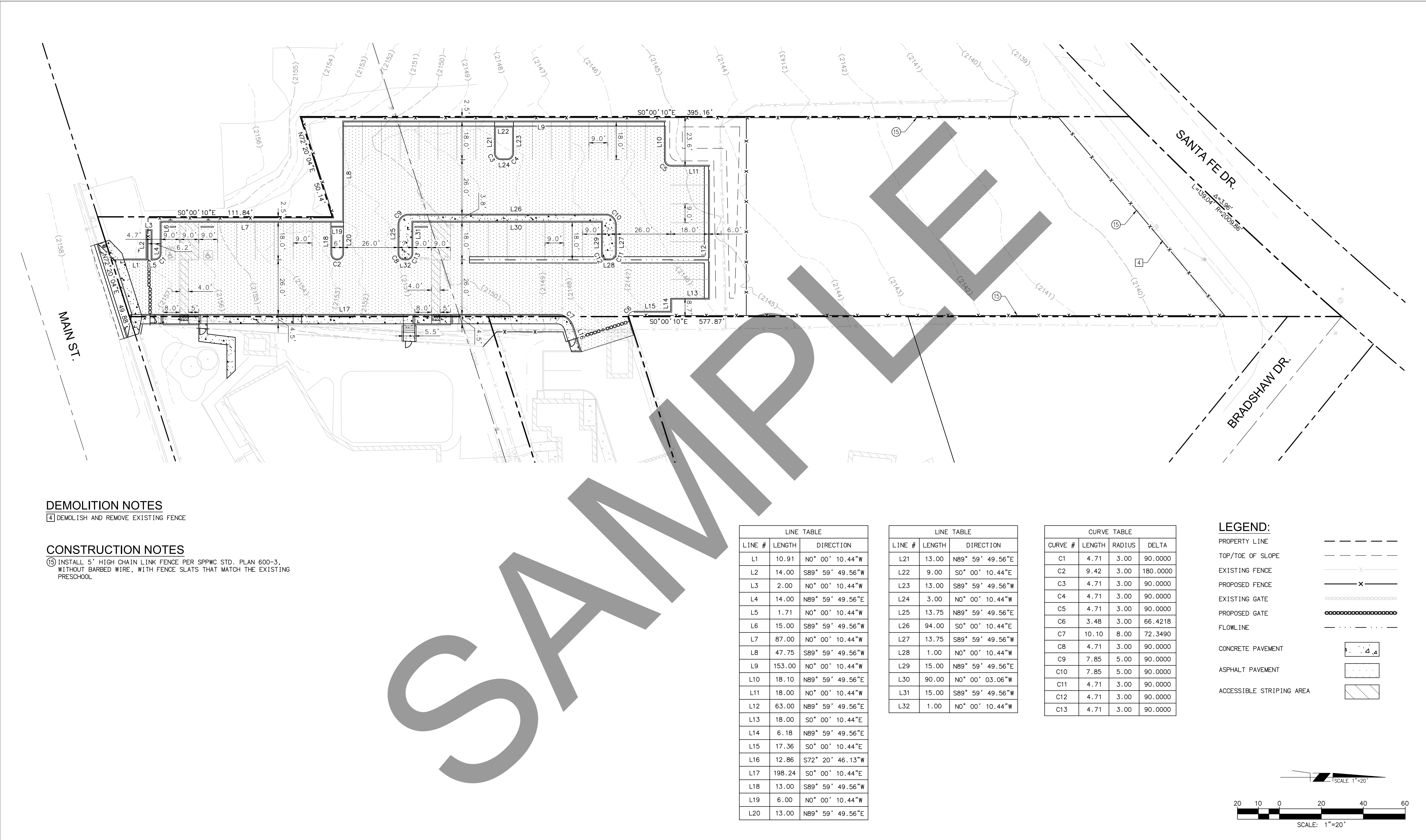
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5 HUTTON CENTRE DR. SUITE 500
SANTA ANA, CA 92707
PHONE: (949) 472-3505
MBAKERINTL.COM

4/6/2021
BID SET

MARK	REVISIONS	APPR	DATE

COUNTY OF SAN BERNARDINO
REAL ESTATE SERVICES DEPARTMENT -
PROJECT MANAGEMENT DIVISION

DETAILS SHEET	ROAD NO.
BARSTOW PARKING LOT PROJECT # 10.10.1133 COUNTY OF SAN BERNARDINO	FILE NO.
	SHEET C2.0



DEMOLITION NOTES

4 DEMOLISH AND REMOVE EXISTING FENCE

CONSTRUCTION NOTES

15 INSTALL 5' HIGH CHAIN LINK FENCE PER SPPWC STD. PLAN 600-3, WITHOUT BARBED WIRE, WITH FENCE SLATS THAT MATCH THE EXISTING PRESCHOOL

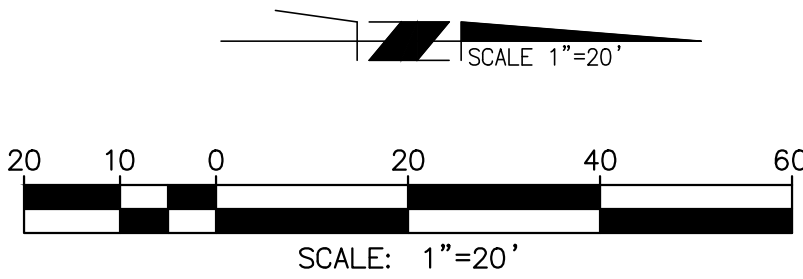
LINE TABLE		
LINE #	LENGTH	DIRECTION
L1	10.91	N0° 00' 10.44"W
L2	14.00	S89° 59' 49.56"W
L3	2.00	N0° 00' 10.44"W
L4	14.00	N89° 59' 49.56"E
L5	1.71	N0° 00' 10.44"W
L6	15.00	S89° 59' 49.56"W
L7	87.00	N0° 00' 10.44"W
L8	47.75	S89° 59' 49.56"W
L9	153.00	N0° 00' 10.44"W
L10	18.10	N89° 59' 49.56"E
L11	18.00	N0° 00' 10.44"W
L12	63.00	N89° 59' 49.56"E
L13	18.00	S0° 00' 10.44"E
L14	6.18	N89° 59' 49.56"E
L15	17.36	S0° 00' 10.44"E
L16	12.86	S72° 20' 46.13"W
L17	198.24	S0° 00' 10.44"E
L18	13.00	S89° 59' 49.56"W
L19	6.00	N0° 00' 10.44"W
L20	13.00	N89° 59' 49.56"E


LINE TABLE		
LINE #	LENGTH	DIRECTION
L21	13.00	N89° 59' 49.56"E
L22	9.00	S0° 00' 10.44"E
L23	13.00	S89° 59' 49.56"W
L24	3.00	N0° 00' 10.44"W
L25	13.75	N89° 59' 49.56"E
L26	94.00	S0° 00' 10.44"E
L27	13.75	S89° 59' 49.56"W
L28	1.00	N0° 00' 10.44"W
L29	15.00	N89° 59' 49.56"E
L30	90.00	N0° 00' 03.06"W
L31	15.00	S89° 59' 49.56"W
L32	1.00	N0° 00' 10.44"W

CURVE TABLE			
CURVE #	LENGTH	RADIUS	DELTA
C1	4.71	3.00	90.0000
C2	9.42	3.00	180.0000
C3	4.71	3.00	90.0000
C4	4.71	3.00	90.0000
C5	4.71	3.00	90.0000
C6	3.48	3.00	66.4218
C7	10.10	8.00	72.3490
C8	4.71	3.00	90.0000
C9	7.85	5.00	90.0000
C10	7.85	5.00	90.0000
C11	4.71	3.00	90.0000
C12	4.71	3.00	90.0000
C13	4.71	3.00	90.0000

LEGEND:

- PROPERTY LINE
- TOP/TOE OF SLOPE
- EXISTING FENCE
- PROPOSED FENCE
- EXISTING GATE
- PROPOSED GATE
- FLOWLINE
- CONCRETE PAVEMENT
- ASPHALT PAVEMENT
- ACCESSIBLE STRIPING AREA





DIAL TOLL FREE
8 1 1
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UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

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NAME: P710
NAVD 88 ELEV. (FT) ACCURACY: 2.95841

PREPARED BY:

Michael Baker
INTERNATIONAL

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PHONE: (949) 472-3505
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**4/6/2021
BID SET**

MARK	REVISIONS	APPR	DATE

**COUNTY OF SAN BERNARDINO
REAL ESTATE SERVICES DEPARTMENT -
PROJECT MANAGEMENT DIVISION**

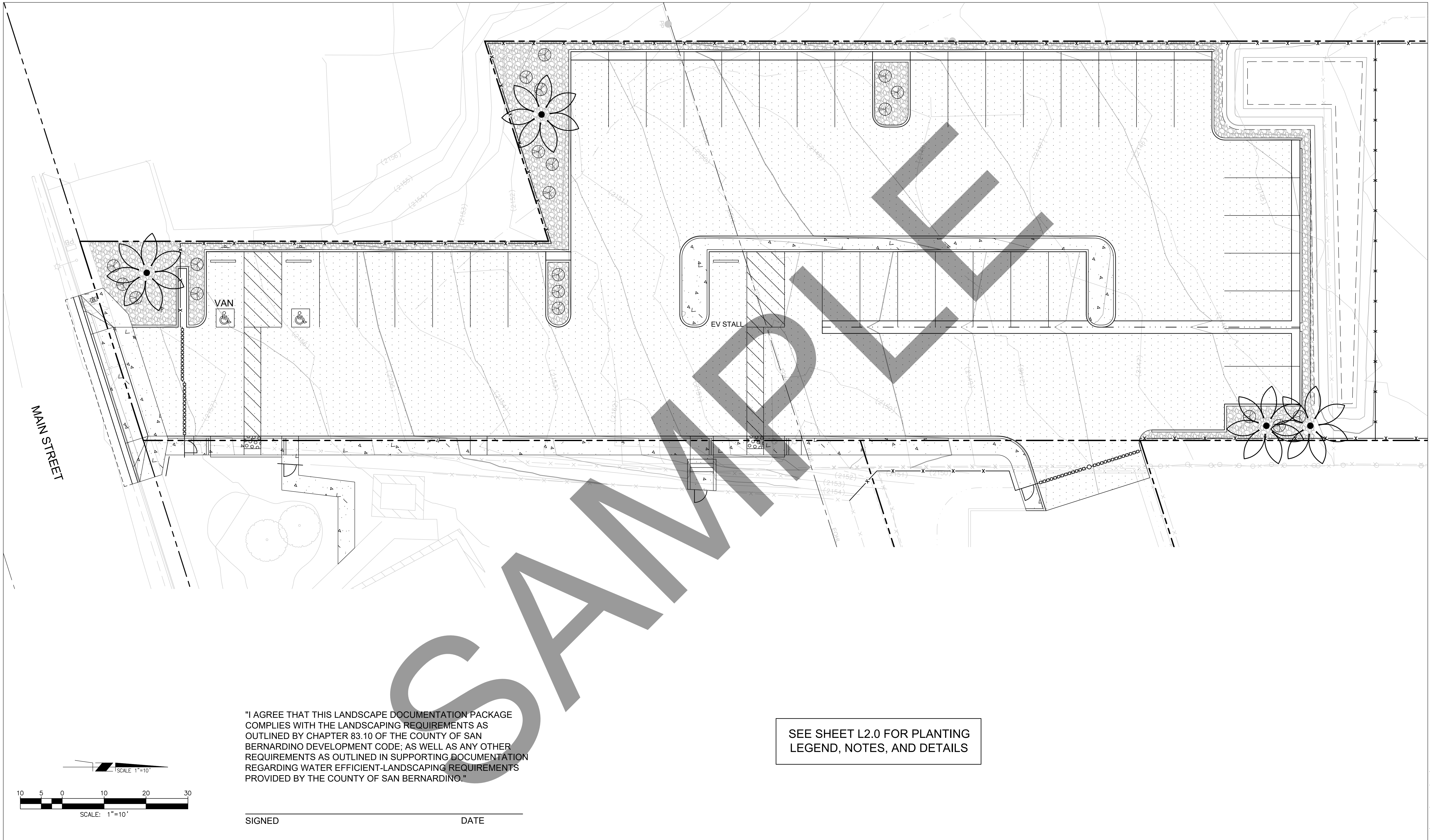
HORIZONTAL CONTROL PLAN

**BARSTOW PARKING LOT
PROJECT # 10.10.1133
COUNTY OF SAN BERNARDINO**

ROAD NO.

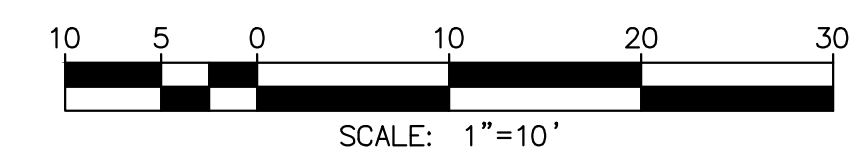
FILE NO.

SHEET
C3.0




"I AGREE THAT THIS LANDSCAPE DOCUMENTATION PACKAGE COMPLIES WITH THE LANDSCAPING REQUIREMENTS AS OUTLINED BY CHAPTER 83.10 OF THE COUNTY OF SAN BERNARDINO DEVELOPMENT CODE; AS WELL AS ANY OTHER REQUIREMENTS AS OUTLINED IN SUPPORTING DOCUMENTATION REGARDING WATER EFFICIENT-LANDSCAPING REQUIREMENTS PROVIDED BY THE COUNTY OF SAN BERNARDINO."

SEE SHEET L2.0 FOR PLANTING
LEGEND, NOTES, AND DETAILS



SIGNED _____ DATE _____



811
Know what's below.
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PREPARED BY:

Michael Baker
I N T E R N A T I O N A L

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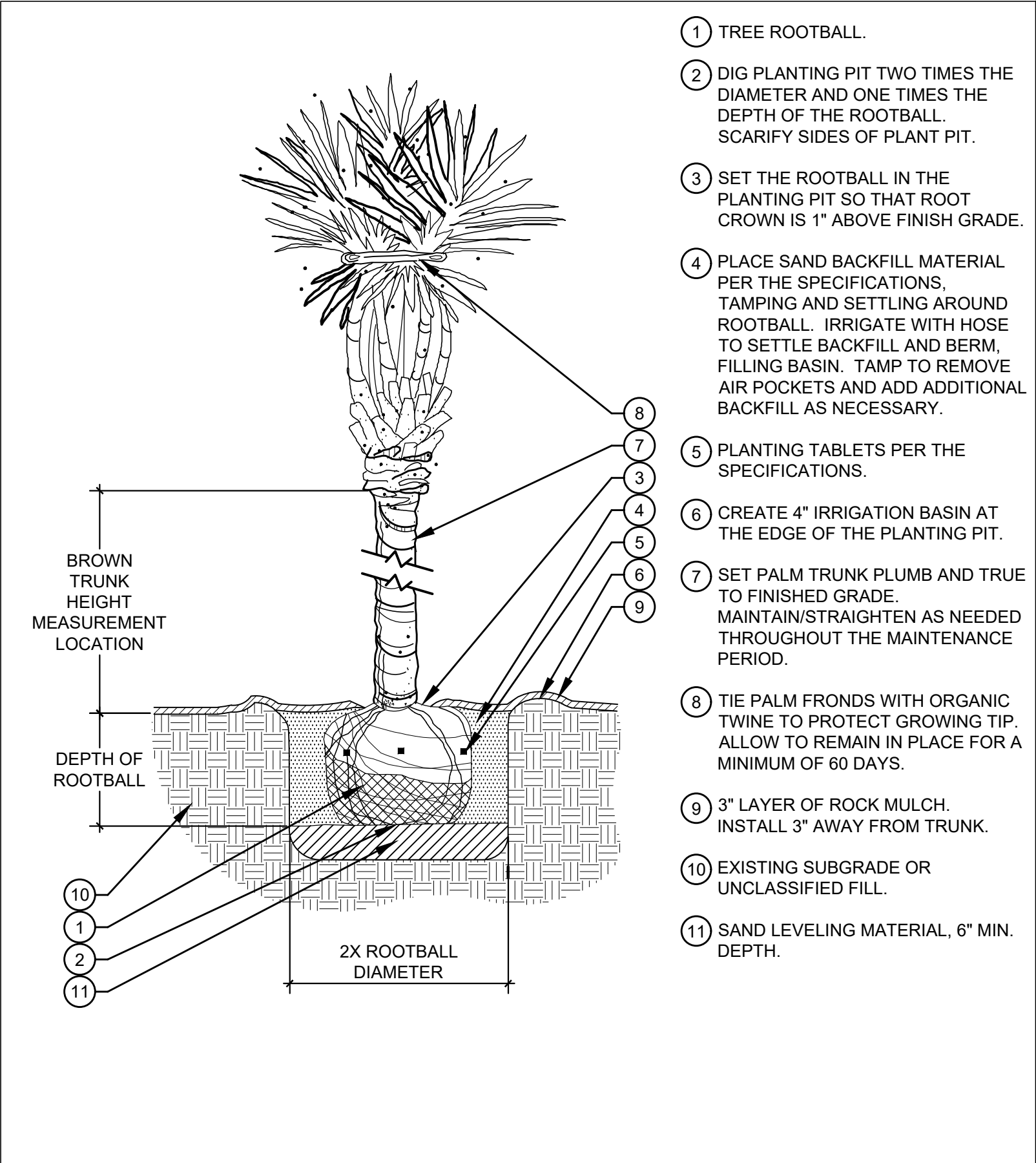
LANDSCAPE PLANTING PLAN

**BARSTOW PARKING LOT
PROJECT # 10.10.1133
COUNTY OF SAN BERNARDINO**

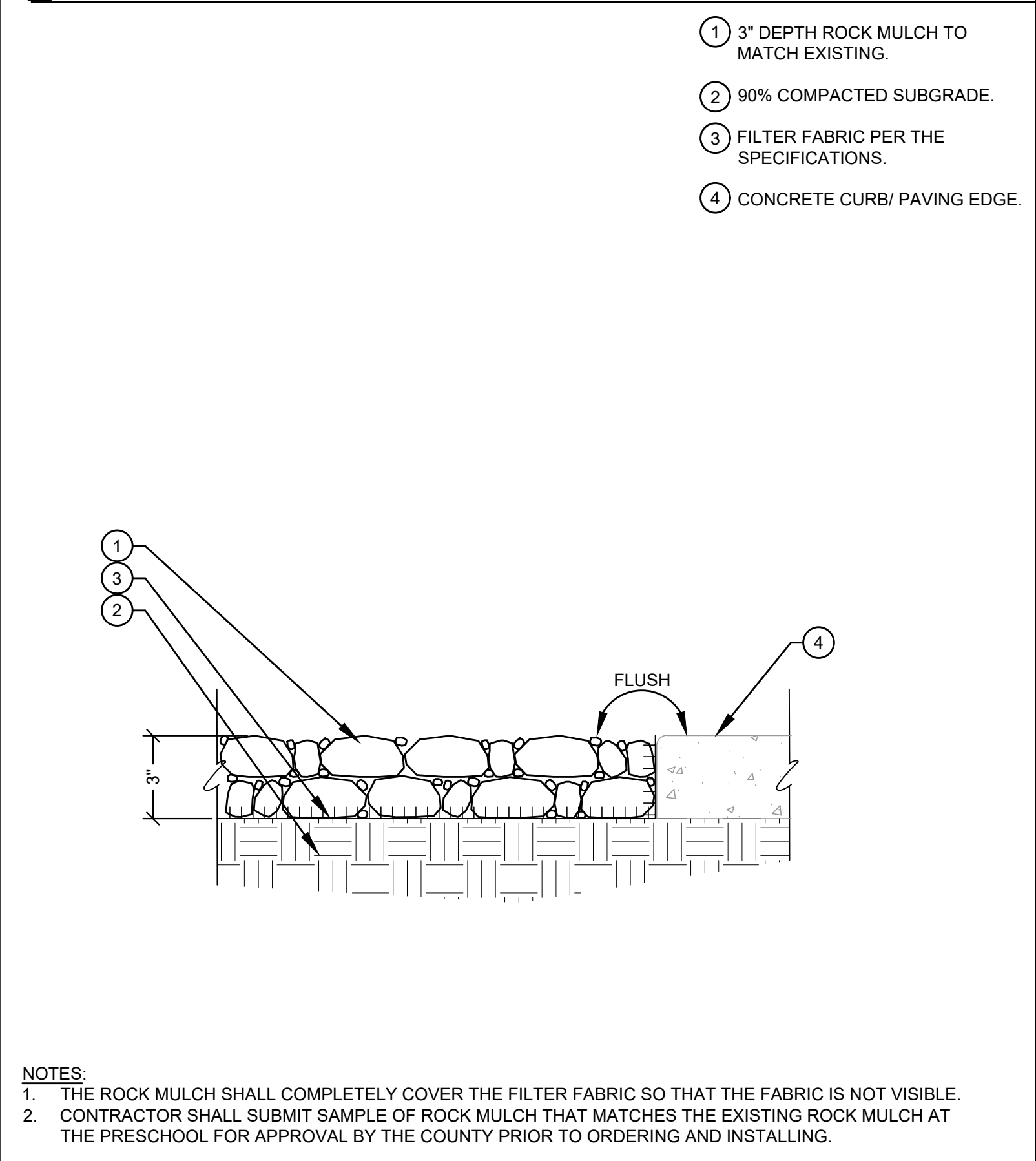
ROAD NO.

FILE NO.

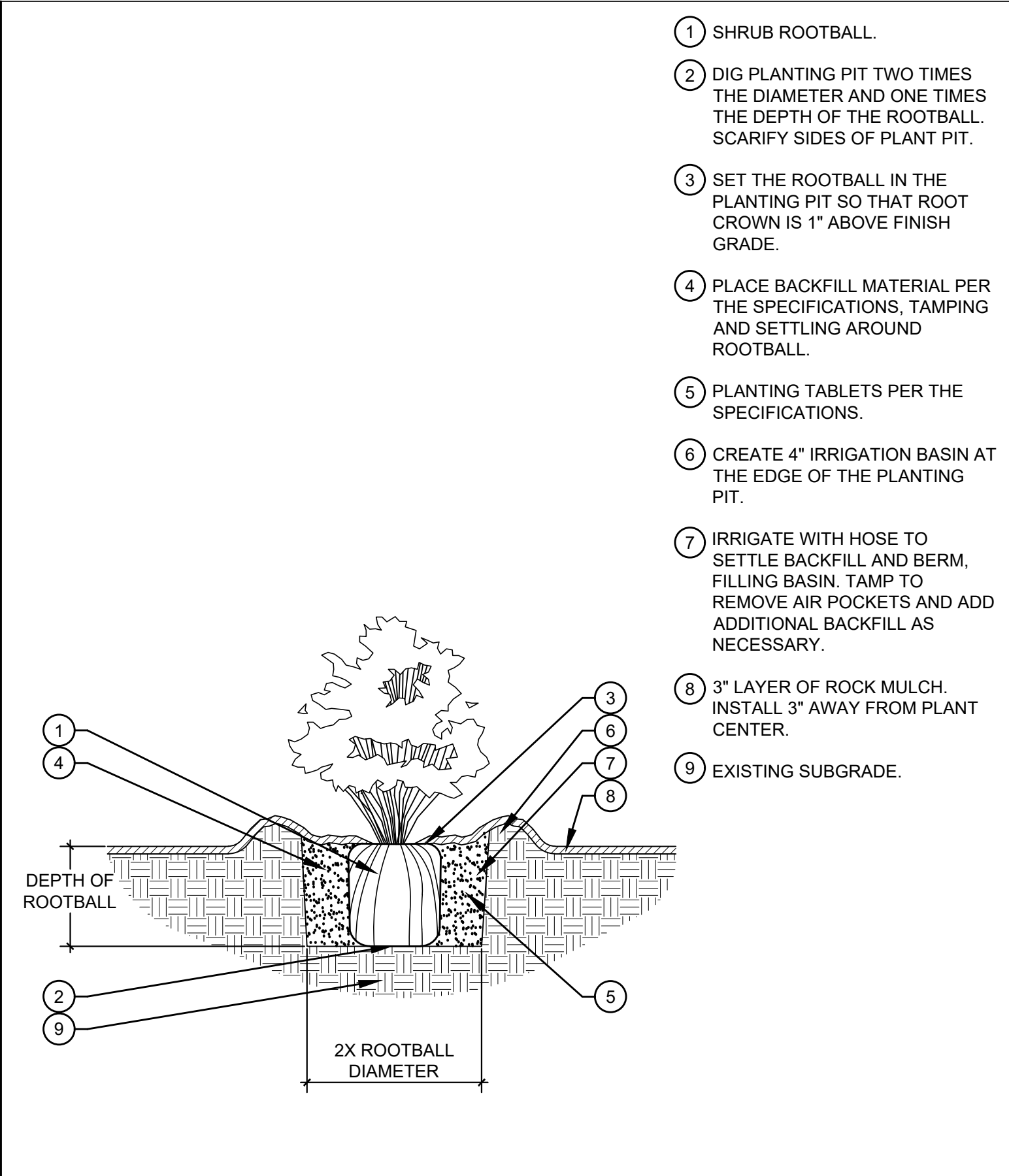
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A PALM TREE PLANTING N.T.S.



C ROCK MULCH N.T.S.




B SHRUB PLANTING N.T.S.

PLANT LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QTY	DETAIL	WATER
TREES						
	WASHINGTONIA FILIFERA	CALIFORNIA FAN PALM	6' BTH	4	DETAIL 'A'	MEDIUM
SHRUBS						
	HESPERALOE PARVIFLORA/ YUCCA	HESPERALOE PARVIFLORA/ YUCCA	1 GAL	20	DETAIL 'B'	LOW
GROUND COVER						
	ROCK MULCH		3" DEPTH	2,158 SF	DETAIL 'C'	

PLANTING NOTES

- PLANTING WORK SHALL CONFORM TO THE SPECIFICATION SPECIAL PROVISIONS.
- PLANT QUANTITIES ARE SHOWN FOR CONTRACTOR'S CONVENIENCE IN ESTIMATING ONLY. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE PLANT MATERIAL FOR EACH SYMBOL SHOWN ON THE PLANTING PLAN.
- ALL WORK SHALL BE SUBJECT TO THE COUNTY PROJECT MANAGER'S ACCEPTANCE AS A CONDITION OF COMPLETION OF WORK BY THE CONTRACTOR.
- THE PLANTING PLAN IS DIAGRAMMATIC. MINOR ADJUSTMENTS IN PLANT LOCATIONS MAY BE MADE AT THE DISCRETION OF THE PROJECT LANDSCAPE ARCHITECT OR THE COUNTY PROJECT MANAGER.
- ALL PLANT MATERIAL SHALL BE SUBJECT TO REVIEW AND APPROVAL BY THE PROJECT LANDSCAPE ARCHITECT OR THE COUNTY PROJECT MANAGER PRIOR TO INSTALLATION. SEE THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- ALL NURSERY TYING MATERIAL AND MARKING TAPES SHALL BE REMOVED AT THE TIME OF PLANTING.
- THE CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL EXISTING UTILITIES, SITE CONDITIONS, STRUCTURES, PROPERTY LINES, AND SERVICES BEFORE COMMENCING WORK TO ENSURE THAT THERE IS NO DAMAGE DURING CONSTRUCTION. THE LOCATIONS OF THESE CONDITIONS SHOWN IN THESE PLANS ARE APPROXIMATE ONLY. ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE COUNTY LANDSCAPE ARCHITECT AND COUNTY PROJECT MANAGER. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING AND REPLACING ANY DAMAGE TO EXISTING UTILITIES DURING CONSTRUCTION WITH NO ADDITIONAL COST TO THE COUNTY.
- PLANT MATERIAL LOCATED ADJACENT TO ANY LIGHT STANDARDS, UTILITY EQUIPMENT, OR DRIVEWAYS, ETC. SHALL BE ADJUSTED TO MAINTAIN A SUITABLE CLEARANCE AS APPROVED BY THE COUNTY PROJECT MANAGER. TREES SHALL NOT BE INSTALLED OVER UNDERGROUND UTILITIES.
- ALL PLANTING AREAS SHALL HAVE A 3" LAYER OF ROCK MULCH PER THE SPECIFICATIONS.
- SEE THE SPECIFICATION SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS.



811
DIAL TOLL FREE
8 1 1
AT LEAST TWO DAYS
BEFORE YOU DIG
**Know what's below.
Call before you dig.**
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

BENCHMARK:

ELEVATIONS AS SHOWN HEREON ARE IN TERMS OF THE NORTH AMERICAN VERTICAL DATUM OF 1988 BASED LOCALLY UPON THE FOLLOWING NGS BENCH MARKS:

NAME: P710
NAVD 88 ELEV. (FT) ACCURACY: 2,958.41

PREPARED BY:



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4/6/2021
BID SET

MARK	REVISIONS	APPR	DATE

COUNTY OF SAN BERNARDINO
REAL ESTATE SERVICES DEPARTMENT -
PROJECT MANAGEMENT DIVISION

PLANTING LEGEND, NOTES,
AND DETAILS

**BARSTOW PARKING LOT
PROJECT # 10.10.1133
COUNTY OF SAN BERNARDINO**

ROAD NO.
FILE NO.
SHEET L2.0



IRRIGATION NOTES

1. ALL LANDSCAPE AND IRRIGATION SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE FOLLOWING:
- THE CALIFORNIA CODE OF REGULATIONS TITLE 23, DIVISION 2, CHAPTER 2.7. MODEL WATER EFFICIENT LANDSCAPE ORDINANCE;
 - THE SAN BERNARDINO COUNTY DEVELOPMENT CODE, CHAPTER 83.10 LANDSCAPING STANDARDS;
 - THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION "GREENBOOK" LATEST EDITION (A COPY SHALL BE KEPT ON SITE AT ALL TIMES);
 - THE SPECIFICATION SPECIAL PROVISIONS;
 - THE CURRENT UNIFORM BUILDING CODE AND ALL APPLICABLE ORDINANCES AND OTHER LANDSCAPE RELATED CITY AND REGIONAL STANDARDS.
2. MAINLINE PIPING BETWEEN THE POINT OF CONNECTION, METER AND BACKFLOW PREVENTER TO BE MATERIAL AS REQUIRED BY GOVERNING WATER DISTRICT.
3. THE CONTRACTOR SHALL OBTAIN, COORDINATE AND PAY FOR ANY AND ALL PERMITS AND ALL INSPECTIONS AS REQUIRED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE AND LIABLE FOR ANY ENCR OACHMENT INTO ADJACENT PROPERTY, R.O.W.'S, EASEMENTS, SETBACKS OR ANY OTHER LEGAL PROPERTY RESTRICTIONS EITHER MARKED OR UNMARKED.
5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIAR WITH ALL UNDERGROUND UTILITIES. CONTRACTOR SHALL REPAIR/REPLACE, AT NO ADDITIONAL COST TO THE COUNTY, ANY DAMAGE TO UNDERGROUND UTILITIES THAT MAY OCCUR.
6. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO BE FAMILIAR WITH ALL GRADE DIFFERENCES, SLOPES, LOCATION OF WALLS, RETAINING WALLS, CURBS, ETC. IRRIGATION CONTRACTOR SHALL COORDINATE ALL WORK WITH THE GENERAL CONTRACTOR AND OTHER SUBCONTRACTORS FOR THE LOCATION OF PIPE SLEEVES THROUGH WALLS AND FOOTINGS, UNDER ROADS, PAVING AND STRUCTURES.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ACTIVITIES WITH ALL AGENCIES AND OTHER TRADES.
8. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS SHOWN ON PLANS AT THE SITE PRIOR TO COMMENCEMENT OF ANY WORK. ALL DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO PROJECT LANDSCAPE ARCHITECT AND THE COUNTY PROJECT MANAGER FOR DIRECTION. ANY CONTINUATION OF WORK IS AT THE CONTRACTOR RISK AND EXPENSE.
9. THE WORK ON THESE PLANS IS DIAGRAMMATIC. ALL ITEMS, I.E. CONTROLLERS, VALVES, MAINLINES, SLEEVES, WIRES, IRRIGATION HEADS ETC. ARE SHOWN IN THEIR APPROXIMATE LOCATIONS ONLY AND SHALL BE INSTALLED IN PLANTING AREAS, TYPICAL. DO NOT SCALE DIMENSIONS. DETAIL DRAWINGS MAY CLARIFY LOCATION OF SOME ITEMS. THE CONTRACTOR SHALL NOT LOCATE ANY ITEMS WHERE IT IS OBVIOUS THAT THEY ARE IN CONFLICT WITH UNDERGROUND UTILITIES, STRUCTURES, OTHER IMPROVEMENTS, OR VEHICULAR OR PEDESTRIAN SAFETY CONSIDERATIONS.
10. MAINLINE MAY BE INSTALLED IN A STRAIGHT LINE, HOWEVER, REMOTE CONTROL VALVES SHALL BE INSTALLED AT LOCATIONS INDICATED ON IRRIGATION PLANS. REMOTE CONTROL VALVES SHALL BE INSTALLED PER THE VALVE & REMOTE CONTROL VALVE MANIFOLD DETAILS WITH DISTANCE FROM CONCRETE EDGE STRICTLY ENFORCED.
11. THE IRRIGATION SYSTEM DESIGN IS BASED ON A MINIMUM OPERATING PRESSURE AS SHOWN ON THE "CRITICAL ANALYSIS" ON THIS SHEET. CONTRACTOR SHALL VERIFY WATER PRESSURES PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCES BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE PROJECT LANDSCAPE ARCHITECT AND THE COUNTY PROJECT MANAGER.
12. INSTALL CONTROLLER PER MANUFACTURER'S INSTRUCTIONS AND ALL APPLICABLE ELECTRIC CODE TO 120V, 60 CYCLE, SINGLE-PHASE AC ELECTRICAL SERVICE (PROVIDED BY OTHERS).
13. IRRIGATION CONTROL WIRE (NOT SHOWN) SHALL BE LOCATED BELOW MAINLINE. TAPE & BUNDLE AT 10' O.C. LOCATE WIRE IN SLEEVE WHEN UNDER PAVING AND PULL BOXES & AT ALL ANGLES (ALL ANGLES TO BE 90 DEGREE). CONTRACTOR SHALL SIZE CONTROL WIRES AS REQUIRED. CONTRACTOR SHALL PROVIDE TWO (2) EXTRA CONTROL WIRE RUN FROM THE CONTROLLER, ALONG MAINLINE, TO THE FARTHEST VALVE
14. SPLICING OF 24 VOLT WIRES WILL NOT BE PERMITTED EXCEPT IN VALVE BOXES. LEAVE A 24" COIL OF EXCESS WIRE AT EACH SPLICE. LABEL ALL WIRES W/WATERPROOF MARKERS AT ALL SPLICES, VALVE MANIFOLDS AND CONTROLLER.
15. FINAL LOCATION OF THE BACKFLOW PREVENTION DEVICE SHALL BE APPROVED BY THE COUNTY PROJECT MANAGER. DO NOT INSTALL WITHIN INTERSECTION'S SIGHT LINE DISTANCES.
16. SLEEVE IRRIGATION WIRING UNDER ALL PAVING. SLEEVE IRRIGATION LATERALS UNDER ALL PAVING. SLEEVE MAINLINE UNDER ALL PAVING. ALL SLEEVES TO BE 2x SIZE OF PIPE OR WIRE BUNDLE TO BE SLEEVED. 2" DIA. MIN.
17. SPRINKLER HEADS SHALL BE INSTALLED 24" IN FROM EDGE OF WALKS, CURBS OR OTHER HARD SURFACES.
18. USE CHECK VALVES AS REQUIRED TO ELIMINATE LOW HEAD DRAINAGE.
19. INSTALL IN-LINE DRIP CHECK VALVE FOR DRIPLINE TUBING WITH 8" OR GREATER ELEVATION CHANGE MINIMUM ONE CHECK VALVE FOR EACH DRIP LINE IN SYSTEM TO PREVENT ANY LOW DRAINAGE .
20. EMERGENCY SHUTOFF VALVES: BALL VALVES SHALL BE PROVIDED AT POINTS OF CONNECTION AND ZONE ISOLATION POINTS.
21. THE CONTRACTOR SHALL FLUSH AND ADJUST ALL SPRINKLER HEADS FOR OPTIMUM PERFORMANCE AND TO PREVENT OVERSPRAY ONTO WALKS, ROADWAYS AND/OR BUILDINGS AS MUCH AS POSSIBLE. THIS SHALL INCLUDE ADJUSTING THE HEADS, SELECTING THE BEST DEGREE OF ARC TO FIT THE EXISTING SITE CONDITIONS AND TO THROTTLE THE FLOW CONTROL AT EACH VALVE TO OBTAIN THE OPTIMUM OPERATING PRESSURE FOR EACH SYSTEM.
22. THE CONTRACTOR SHALL ONLY APPLY SUFFICIENT WATER TO PROMOTE HEALTHY GROWTH OF THE PLANT MATERIAL. AT NO TIME WILL THE CONTRACTOR APPLY WATER AT A RATE OF FREQUENCY WHICH CAUSES RUN-OFF OR SOIL SATURATION.
23. IRRIGATION SYSTEMS SHALL NOT SPRAY DIRECTLY ONTO ANY GAS OR ELECTRIC FACILITIES, STORM DRAIN, ACCESS ROADS OR MAINTENANCE PADS.
24. ALL MAIN LINE PIPES SHALL BE PRESSURE TESTED PER THE SPECIFICATIONS WITH THE VALVES INSTALLED. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT NEEDED. IF ANY LEAKS DEVELOP, THE REPAIRS ARE TO BE MADE AND TEST REPEATED UNTIL THE SYSTEM IS PROVEN WATERTIGHT. THE CONTRACTOR IS TO CENTER LOAD THE PIPE AND LEAVE ALL JOINTS EXPOSED FOR INSPECTION. THE PRESSURE TEST SHALL BE OBSERVED AND APPROVED BY THE COUNTY PROJECT MANAGER. WHEN THE PIPE IS PROVEN WATERTIGHT AND ONLY THEN MAY THE LINE BE BACK-FILLED.
25. IRRIGATION CONTRACTOR SHALL GUARANTEE THE ENTIRE IRRIGATION SYSTEM TO BE FREE OF DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE (1) YEAR FROM FINAL ACCEPTANCE BY THE COUNTY.
26. THE CONTRACTOR SHALL KEEP THE PREMISES CLEAN AND FREE OF EXCESS EQUIPMENT, MATERIALS AND RUBBISH INCIDENTAL TO HIS WORK.
27. THE CONTRACTOR SHALL PROVIDE AND KEEP AN UP-TO-DATE "RECORD DRAWING" SHOWING ALL CHANGES TO THE ORIGINAL DRAWINGS AND EXACT LOCATIONS OF FACILITIES INSTALLED. BEFORE FINAL INSPECTION, THE CONTRACTOR SHALL FURNISH "RECORD DRAWINGS" TO THE PROJECT INSPECTOR.
28. AN IRRIGATION AUDIT REPORT SHALL BE PERFORMED IMMEDIATELY FOLLOWING THE COMPLETION OF CONSTRUCTION. CONTRACTOR WILL BE REQUIRED TO HIRE A THIRD PARTY CERTIFIED IRRIGATION AUDITOR TO PROVIDE AN AUDIT REPORT TO THE COUNTY ON THE NEW AND MODIFIED PORTIONS OF THE IRRIGATION SYSTEM IN CONFORMANCE WITH ALL CURRENT REQUIREMENTS. CONTRACTOR WILL ALSO BE RESPONSIBLE TO MAKE ANY RECOMMENDED REPAIR OR CORRECTIONS THAT RESULT FROM THE IRRIGATION AUDIT REPORT AT NO COST TO THE OWNER.
29. THE CONTRACTOR SHALL PROVIDE ONE CONTROLLER CHART FOR EACH CONTROLLER INSTALLED. THE CHART SHALL SHOW THE AREA IRRIGATED BY THE CONTROLLER AND SHALL BE THE MAXIMUM SIZE THE ENCLOSURE DOOR WILL ALLOW. THE CHART MAY BE REDUCED DRAWING OF THE RECORD DRAWINGS. THE CHART SHALL BE COLORED WITH DIFFERENT COLOR FOR EACH STATION. THE CHART SHALL BE LAMINATED. A DIAGRAM OF THE IRRIGATION PLAN SHOWING HYDROZONES SHALL BE KEPT WITH THE IRRIGATION CONTROLLER FOR SUBSEQUENT MANAGEMENT PURPOSES.
30. THE CONTRACTOR SHALL PROVIDE TWO (2) INDIVIDUALLY BOUND SETS OF OPERATION AND MAINTENANCE MANUALS FOR CONTROLLER REMOTE CONTROL VALVES, SHUT OFF VALVES, QUICK COUPLER VALVES, AND ALL OTHER MECHANICAL DEVICES WITH MOVING PARTS USED IN THIS CONTRACT. PRESENT IN HARDBACK THREE RING BINDERS.
31. PRIOR TO THE APPROVAL OF THE RECORD PLAN, THE LICENSED LANDSCAPE PROFESSIONAL OF RECORD SHALL CERTIFY THAT THE LANDSCAPE AND IRRIGATION HAS BEEN CONSTRUCTED PER THE APPROVED LANDSCAPE AND IRRIGATION AS IS SHOWN HEREON.
32. SEE THE SPECIFICATION SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS.

WATERING SCHEDULE - JUNE

NUMBER	MODEL	TYPE	PRECIP	SUN	MON	TUE	WED	THU	FRI	SAT	IN./WEEK	MIN./WEEK	GAL./WEEK	GAL./DAY
1	RAIN BIRD XACZ-075-PRF	DRIP EMITTER	0.77 in/h		37 min		37 min		37 min		1.4	110	22	7.3
2	RAIN BIRD XACZ-075-PRF	DRIP EMITTER	1.33 in/h		22 min		22 min		22 min		1.4	64	55.4	18.5
TOTALS:					59		59		59			174	77.4	25.8

NOTES:

1. ACTUAL IRRIGATION SCHEDULES SHALL BE REGULATED BY AUTOMATIC, WEATHER BASED, IRRIGATION CONTROLLERS.
2. CONTRACTOR TO ADJUST THE TIMING AS SITE CONDITIONS DICTATE TO MAINTAIN PLANT HEALTH AND MINIMIZE RUNOFF.

WATER EFFICIENT LANDSCAPE WORKSHEET

Appendix B – Sample Water Efficient Landscape Worksheet.

WATER EFFICIENT LANDSCAPE WORKSHEET

This worksheet is filled out by the project applicant and it is a required element of the Landscape Documentation Package.

Reference Evapotranspiration (ETo) 71.7							
Hydrozone # /Planting Description ^a	Plant Factor (PF)	Irrigation Method ^b	Irrigation Efficiency (IE) ^c	ETAF (PF/IE)	Landscape Area (sq. ft.)	ETAF x Area	Estimated Total Water Use (ETWU) ^d
Regular Landscape Areas							
1	0.3	Drip	0.81	0.37	1,237	458	20,367
2	0.5	Drip	0.81	0.62	200	123	5,488
Totals					1,437	582	25,855
Special Landscape Areas							
				1			
				1			
				1			
Totals					(C)	(D)	
ETWU Total							25,855
Maximum Allowed Water Allowance (MAWA) ^e							28,746

^aHydrozone #/Planting Description

E.g
1.) front lawn
2.) low water use plantings
3.) medium water use planting

^eMAWA (Annual Gallons Allowed) = (ETo) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)]

where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year. LA is the total landscape area in square feet, SLA is the total special landscape area in square feet, and ETAF is .55 for residential areas and 0.45 for non-residential areas.

^bIrrigation Method

overhead spray or drip

^cIrrigation Efficiency

0.75 for spray head
0.81 for drip

^dETWU (Annual Gallons Required) = ETo x 0.62 x ETAF x Area

where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year.

ETAF Calculations

Regular Landscape Areas









Total ETAF x Area	582
Total Area	1,437
Average ETAF	0.40

All Landscape Areas

Total ETAF x Area	582
Total Area	1,437
Sitewide ETAF	0.40

Average ETAF for Regular Landscape Areas must be 0.55 or below for residential areas, and 0.45 or below for non-residential areas.

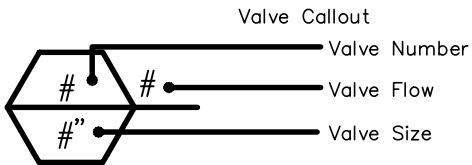
IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	RAIN BIRD XACZ-075-PRF 3/4" LOW FLOW DRIP CONTROL KIT, 3/4" LOW FLOW ANTI-SIPHON VALVE, 3/4" PRESSURE REGULATING RBY FILTER, AND 30PSI PRESSURE REGULATOR, FOR ABOVE GRADE INSTALLATION. 0.2GPM-5GPM.
	BOWSMITH SL200 SERIES SL210 3.0GPH SINGLE OUTLET EMITTER, 0.6GPH THROUGH 3.0GPH FLOW, 1/2" FPT WITH BARBED ELBOW OUTLET. GREEN=0.6GPH, BLUE=1.0GPH, RED=2.0GPH, YELLOW=3.0GPH. INSTALL ABOVE GROUND, TWO EMITTERS PER TREE.
	BOWSMITH SL200 SERIES SL220 2.0GPH SINGLE OUTLET EMITTER, 0.6GPH THROUGH 2.0GPH FLOW, 1/2" FPT WITH BARBED ELBOW OUTLET. GREEN=0.6GPH, BLUE=1.0GPH, RED=2.0GPH, YELLOW=3.0GPH. INSTALL ABOVE GROUND, ONE EMITTER PER SHRUB.
	NIBCO T-580-S6-R-66-LL STAINLESS STEEL BALL VALVE SHUT OFF VALVE
	GRISWOLD 2250HE 1" 1" PRESSURE REDUCING, SURGE ANTICIPATION, NORMALLY CLOSED MASTER VALVE. LIGHTNING PROTECTED. EPOXY COATING. CAST IRON AND BRONZE MATERIAL. NPT END CONNECTION. LOW POWER SOLENOID.
	WEATHERMATIC SL1600-SLPED-1600-SLW1 SMARTLINE 4-ZONE CONTROLLER WITH SMARTLINK FLOW AIRCARD, STAINLESS STEEL ECONOMY PEDESTAL AND WIRED WEATHER SENSOR FOR ET BASED WATERING.
	FLOMEC QS200-10 1" 1" INSERTION FLOWMETER, SCHEDULE 80 PVC HOUSING. 0.22-33 GPM RANGE, MAX. OPERATING PRESSURE 150 PSI. 2-WIRE CONNECTOR W/ LED INDICATORS FOR POWER AND PULSE.
	5/8" WATER METER PER CIVIL PLANS - FIELD VERIFY PRESSURE

———— IRRIGATION LATERAL LINE: PVC SCHEDULE 40 3/4"

———— IRRIGATION MAINLINE: PVC SCHEDULE 40 1"

----- PIPE SLEEVE: PVC SCHEDULE 40



Know what's below.
Call before you dig.

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

BENCHMARK:

ELEVATIONS AS SHOWN HEREON ARE IN TERMS OF THE NORTH AMERICAN VERTICAL DATUM OF 1988 BASED LOCALLY UPON THE FOLLOWING NGS BENCH MARKS:

NAME: P710

NAVD 88 ELEV. (FT) ACCURACY: 2,958.41

PREPARED BY:

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4/6/2021
BID SET

MARK	REVISIONS	APPR	DATE

COUNTY OF SAN BERNARDINO
REAL ESTATE SERVICES DEPARTMENT -
PROJECT MANAGEMENT DIVISION

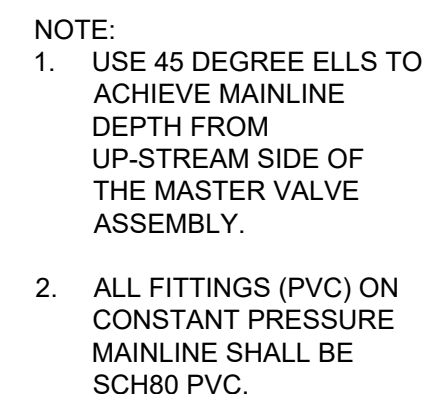
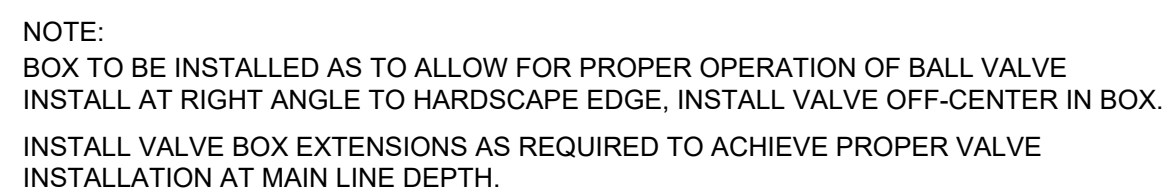
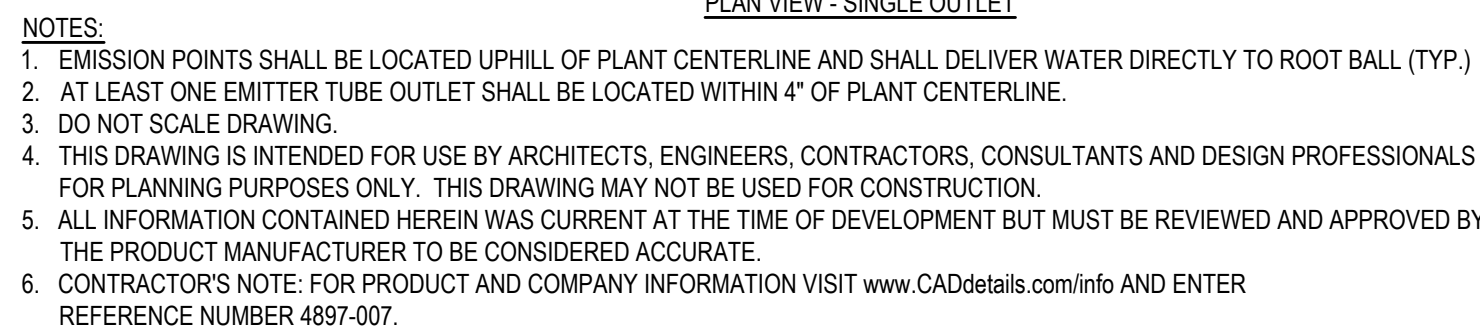
IRRIGATION LEGEND & NOTES

BARSTOW PARKING LOT
PROJECT # 10.10.1133
COUNTY OF SAN BERNARDINO

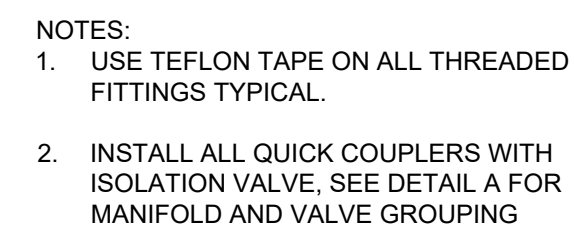
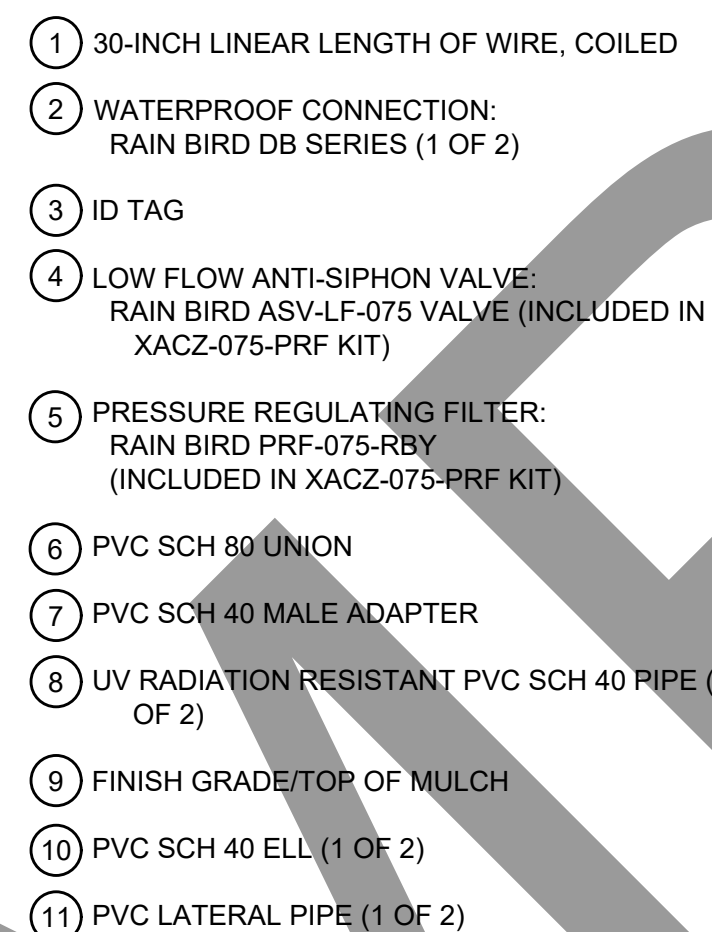
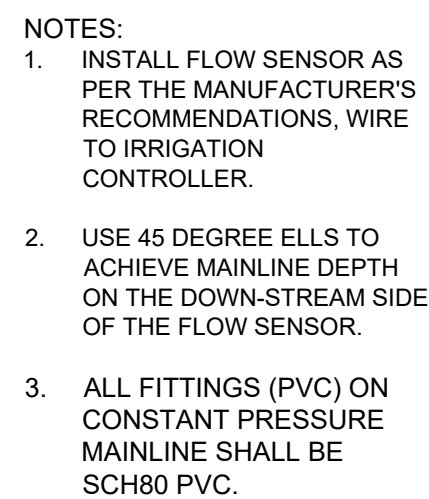
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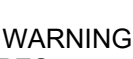
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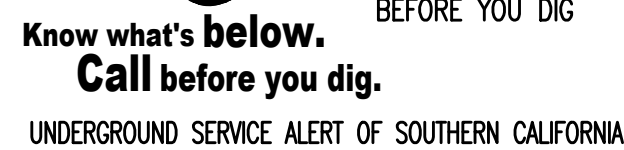
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N.T.S



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**4/6/2021
BID SET**

[illegible]

**COUNTY OF SAN BERNARDINO
REAL ESTATE SERVICES DEPARTMENT -
PROJECT MANAGEMENT DIVISION**

**BARSTOW PARKING LOT
PROJECT # 10.10.1133
COUNTY OF SAN BERNARDINO**

SHEET L5.0

ELECTRICAL GENERAL NOTES

	277/480V SYSTEM	120/208V SYSTEM
PHASE A:	BROWN	BLACK
PHASE B:	ORANGE	RED
PHASE C:	YELLOW	BLUE
NEUTRAL:	GRAY	WHITE
GROUND:	GREEN	GREEN
ISOLATED GROUND:	GREEN/YELLOW	GREEN/YELLOW

SHEET INDEX

E0.1	ELECTRICAL LEGEND
E0.2	PANEL SCHEDULE, CALCULATIONS, SINGLE LINE DIAGRAM, & LIGHT FIXTURE SCHEDULE
E1.1	ELECTRICAL SITE PLAN - LIGHTING
E1.2	ELECTRICAL SITE PLAN - PHOTOMETRICS
E2.1	ELECTRICAL DETAILS
E3.1	TITLE 24 CALCULATIONS
E3.2	TITLE 24 CALCULATIONS



**4/6/2021
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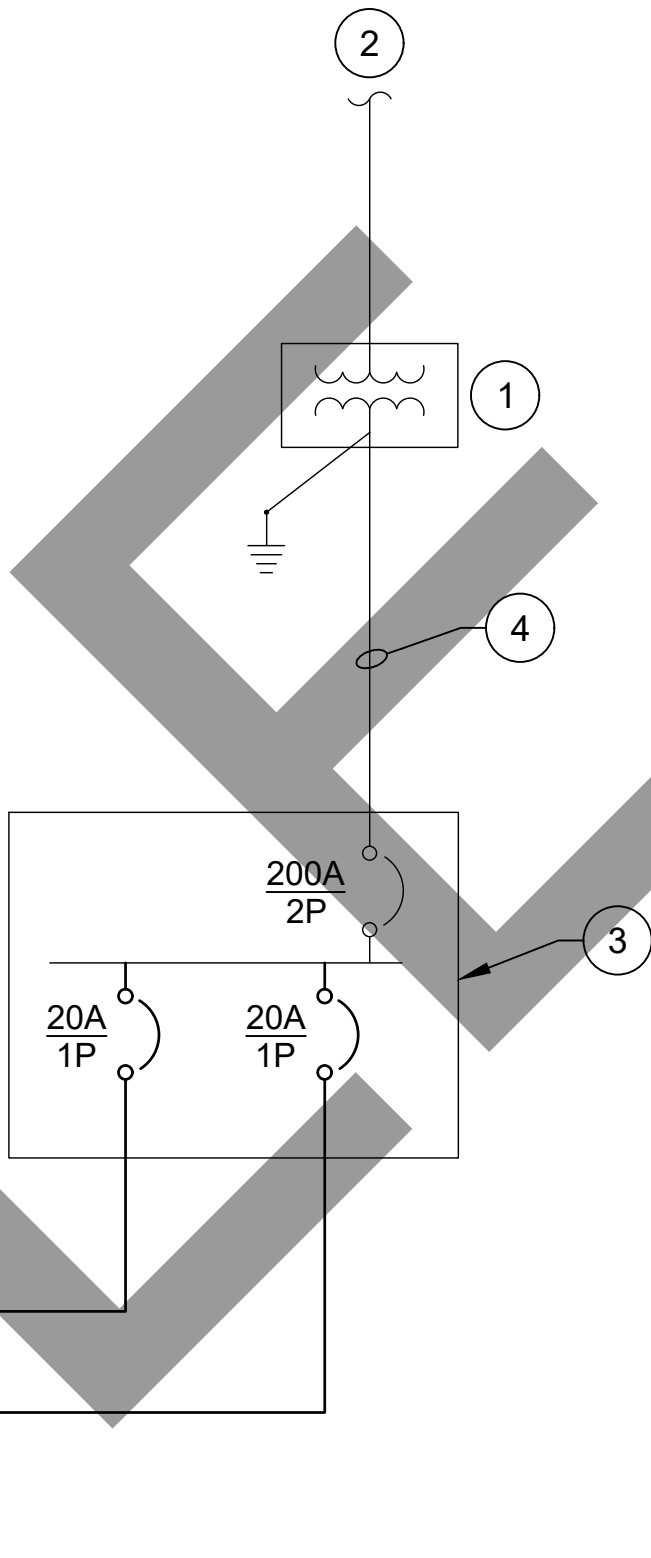
(E) OFFICE BUILDING PANEL "A"		LOCATION: OFFICE BUILDING						BUSS RATING: 225A		120/240V, 1ø, 3W	
		MAIN: 200A								MOUNTING: SURFACE	
		PANEL DEVICE MIN 10KAIC									
LOCATION	VOLTAMPS		CIR	BRK	A	B	BRK	CIR	VOLTAMPS		LOCATION
	øA	øB							øA	øB	
GARBAGE			1	20	*		20	2			LIGHT
KITCHEN OUTLET			3	20		*	20	4			CONFERENCE ROOM
RESTROOM LIGHT			5	20	*		20	6			LOBBY OUTLET
RESTROOM GFCI OUTLET			7	20	*	*	20	8			OFFICE
LITCHEN OUTLET			9	20	*		20	10			OFFICE
REFRIGERATOR			11	20		*	20	12			LOBBY OUTLET
LOBBY OUTLET			13	20	*		20	14			SPACE
DATE OUTLET			15	20		*	20	16			SPACE
FAN COIL			17	20	*		30	18			AIR CONDITIONING
			19	2P		*	2P	20			
SPACE			21		*			22			SPACE
SPACE			23			*		24			SPACE
SPACE			25		*			26			SPACE
SPACE			27			*		28			SPACE
SPACE			29		*			30			SPACE
SPACE			31			*		32			SPACE
SPACE			33		*			34			SPACE
SPACE			35			*		36			SPACE
SPACE			37		*			38			SPACE
1 PARKING LOT LIGHTS		583	39	20	*	*		40			SPACE
1 IRRIGATION CONTROL			41	20	*			42			SPACE
øA = 100		øB = 583									
TOTAL CONNECTED VA =		1	KVA								
+ 25% LCL =			KVA								
TOTAL		1	KVA								
CONNECTED LOAD =		3	A								
MINIMUM FEEDER SIZE =		3	A								

- 1 PROVIDE CIRCUIT BREAKER IN EXISTING PANEL SPACE.
- 2 EXISTING LOADS.

2

PANEL SCHEDULE

SCALE: NOT TO SCALE



ELECTRICAL KEYNOTES

- 1 EXISTING 37.5KVA POLE MOUNTED SCE TRANSFORMER, 240/120V-1Ø.
- 2 EXSITING SCE OVERHEAD SERVICE.
- 3 EXISTING 200A-240/120V-1Ø PANEL MOUNTED ON EXTERIOR WALL OF OFFICE BUILDING.
- 4 EXISTING 200A OVERHEAD SERVICE FEEDER.
- 5 PROVIDE (1) 1"C.- 2 #10 & 1 #10 GND.
- 6 TO PARKING LOT LIGHT FIXTURES.
- 7 120V CIRCUIT TO IRRIGATION CONTROLLER.
- 8 PROVIDE 3/4"C. - 2 #12 & 1 #12 GND.

1

SINGLE LINE DIAGRAM

NO SCALE

LIGHTING FIXTURE SCHEDULE									
TYPE	SYMBOL	WATT	VOLT	LAMP		DESCRIPTION	BALLAST		MANUFACTURER AND CATALOG NUMBER
				#	TYPE		#	TYPE	
F1		53	120	1	LED 4540 LUMENS 5000K 90CRI	POLE MOUNTED PARKING LOT FIXTURE, LED, 0-10V DIMMING, ALUMINUM HOUSING, FULL CUT-OFF, TYPE 4 DISTRIBUTION, 25' (HIGHT) X 5" (DIA) NON-TAPERED STEEL POLE, UL LISTED.		LED 0-10V DIMMING	CREE LIGHTING MOUNT: OSQ-DA+LUMINAIRES: OSQ-A-NM-4ME-B-50K-90CRI-UL-BZ-ML-R+PHOTOCELL POLE: 28' (HIGHT), 5" (DIA.) NON-TAPERED STEEL POLE, BRONZE COLOR.
F2		106	120	2	LED 9080 LUMENS 5000K 90CRI	SIMILAR TO TYPE "F1" FIXTURE EXCEPT WITH TWIN LUMINAIRES @90 DEGREES		LED 0-10V DIMMING	CREE LIGHTING MOUNT: OSQ-DA+LUMINAIRES: (2)OSQ-A-NM-4ME-B-50K-90CRI-UL-BZ-ML-R+PHOTOCELL POLE: 28' (HIGHT), 5" (DIA.) NON-TAPERED STEEL POLE, BRONZE COLOR.

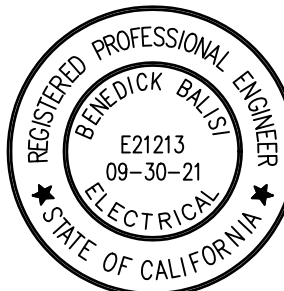
3

LUMINAIRE SCHEDULE

SCALE: NOT TO SCALE

TRENCHING NOTE

LOCATIONS OF EXISTING UNDERGROUND UTILITY AND OTHER UNDERGROUND OBSTRUCTIONS AND CONDITIONS ARE GENERALLY UNKNOWN. THE CONTRACTOR SHALL HIRE A UTILITY LOCATING SERVICE TO LOCATE ALL EXISTING UNDERGROUND UTILITIES PRIOR TO DIGGING. VERIFY EXACT LOCATION SIZE AND EXTENT OF ALL OBSTRUCTIONS AND OTHER CONDITIONS WHICH MAY AFFECT THE PROPOSED WORK UNDER THE PROJECT. TAKE EVERY PRECAUTION TO PREVENT DAMAGE TO EXISTING WORK, INCLUDING HAND DIGGING AROUND EXISTING UTILITIES, TREE ROOT SYSTEMS, AND HARDSCAPE FEATURES. ANY DAMAGE TO EXISTING UTILITIES OR STRUCTURES SHALL BE IMMEDIATELY REPAIRED OR REPLACED IN ACCORDANCE WITH THE RESIDENT ENGINEER'S DIRECTION AT THE CONTRACTOR'S EXPENSE.



EPI THE ENGINEERING PARTNERS, INC.
CONSULTING ENGINEERS
10150 MEANLEY DRIVE, SUITE 200
SAN DIEGO, CA 92131
(858) 824-1761 FAX (858) 824-1768
EPI PROJECT #173-121E



BENCHMARK:

PREPARED BY:

Michael Baker

I N T E R N A T I O N A L

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SUITE 500
SANTA ANA, CA 92707
PHONE: (949) 472-3505
MBAKERINTL.COM

4/6/2021
BID SET

MARK	REVISIONS	APPR	DATE

COUNTY OF SAN BERNARDINO
REAL ESTATE SERVICES DEPARTMENT -
PROJECT MANAGEMENT DIVISION

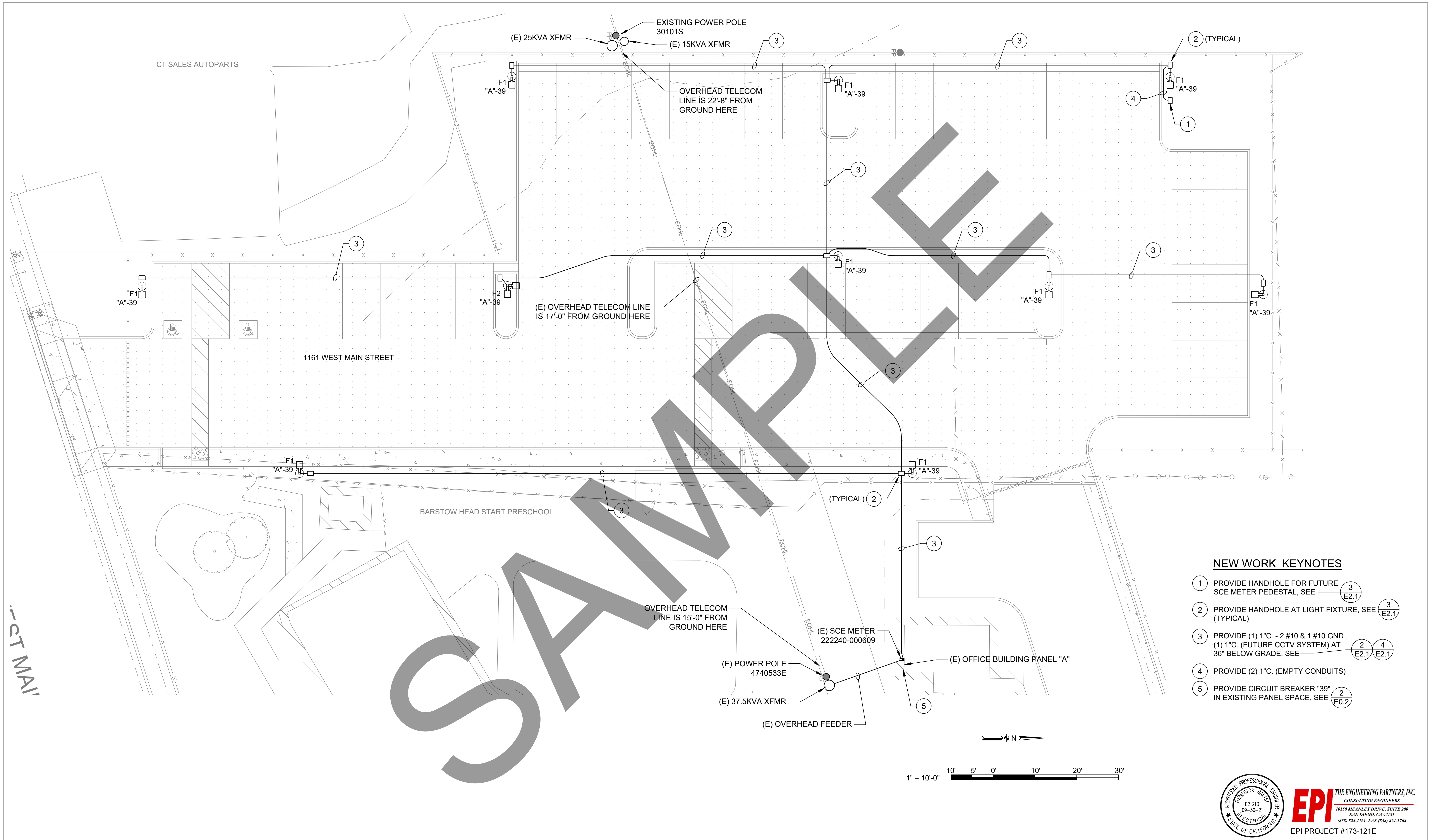
PANEL SCHED, TRENCHING NOTE, LOAD
RECORDING & LIGHT FIXT SCHED

BARSTOW PARKING LOT
PROJECT # 10.10.1133
COUNTY OF SAN BERNARDINO

ROAD NO.

FILE NO.

SHEET
E0.2



NEW WORK KEYNOTES

- 1 PROVIDE HANDHOLE FOR FUTURE SCE METER PEDESTAL, SEE 3 E2.1
- 2 PROVIDE HANDHOLE AT LIGHT FIXTURE, SEE 3 E2.1 (TYPICAL)
- 3 PROVIDE (1) 1" C. - 2 #10 & 1 #10 GND., (1) 1" C. (FUTURE CCTV SYSTEM) AT 36" BELOW GRADE, SEE 2 4 E2.1 E2.1
- 4 PROVIDE (2) 1" C. (EMPTY CONDUITS)
- 5 PROVIDE CIRCUIT BREAKER "39" IN EXISTING PANEL SPACE, SEE 2 E0.2

REGISTERED PROFESSIONAL ENGINEER

BENEDICT BURNS

E21213

09-30-21

ELECTRICAL

STATE OF CALIFORNIA

EPI

THE ENGINEERING PARTNERS, INC.


CONSULTING ENGINEERS

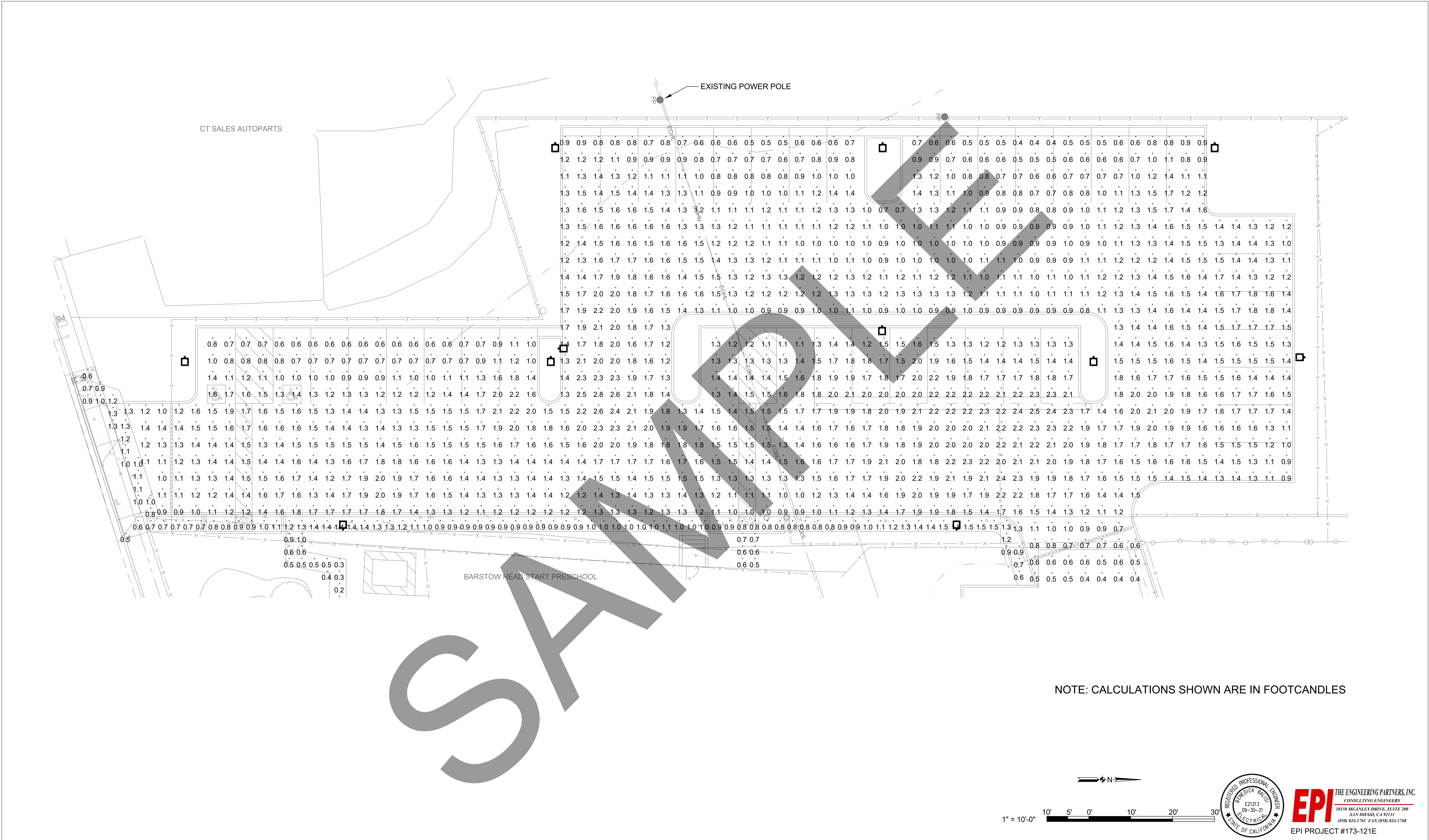
10150 MEANLEY DRIVE, SUITE 200

SAN DIEGO, CA 92131

(619) 824-1761 FAX (619) 824-1768

EPI PROJECT #173-121E

<div><p>811 Know what's below. Call before you dig.</p><p>UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA</p></div>	DIAL TOLL FREE 8 1 1 AT LEAST TWO DAYS BEFORE YOU DIG	BENCHMARK:	PREPARED BY: <div><div>Michael Baker</div><div>INTERNATIONAL</div></div> <p>5 HUTTON CENTRE DR. SUITE 500 SANTA ANA, CA 92707 PHONE: (949) 472-3505 MBAKERINTL.COM</p>	<div>4/6/2021 BID SET</div>	<table><tr><th>MARK</th><th>REVISIONS</th><th>APPR</th><th>DATE</th></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr></table>	MARK	REVISIONS	APPR	DATE																																					COUNTY OF SAN BERNARDINO REAL ESTATE SERVICES DEPARTMENT - PROJECT MANAGEMENT DIVISION	ROAD NO. ELECTRICAL SITE PLAN LIGHTING
					MARK	REVISIONS	APPR	DATE																																							
FILE NO. BARSTOW PARKING LOT PROJECT # 10.10.1133 COUNTY OF SAN BERNARDINO																																															
SHEET E1.1																																															






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COUNTY OF SAN BERNARDINO
REAL ESTATE SERVICES DEPARTMENT -
PROJECT MANAGEMENT DIVISION

ELECTRICAL SITE PLAN
PHOTOMETRICS
BARSTOW PARKING LOT
PROJECT # 10.10.1133
COUNTY OF SAN BERNARDINO

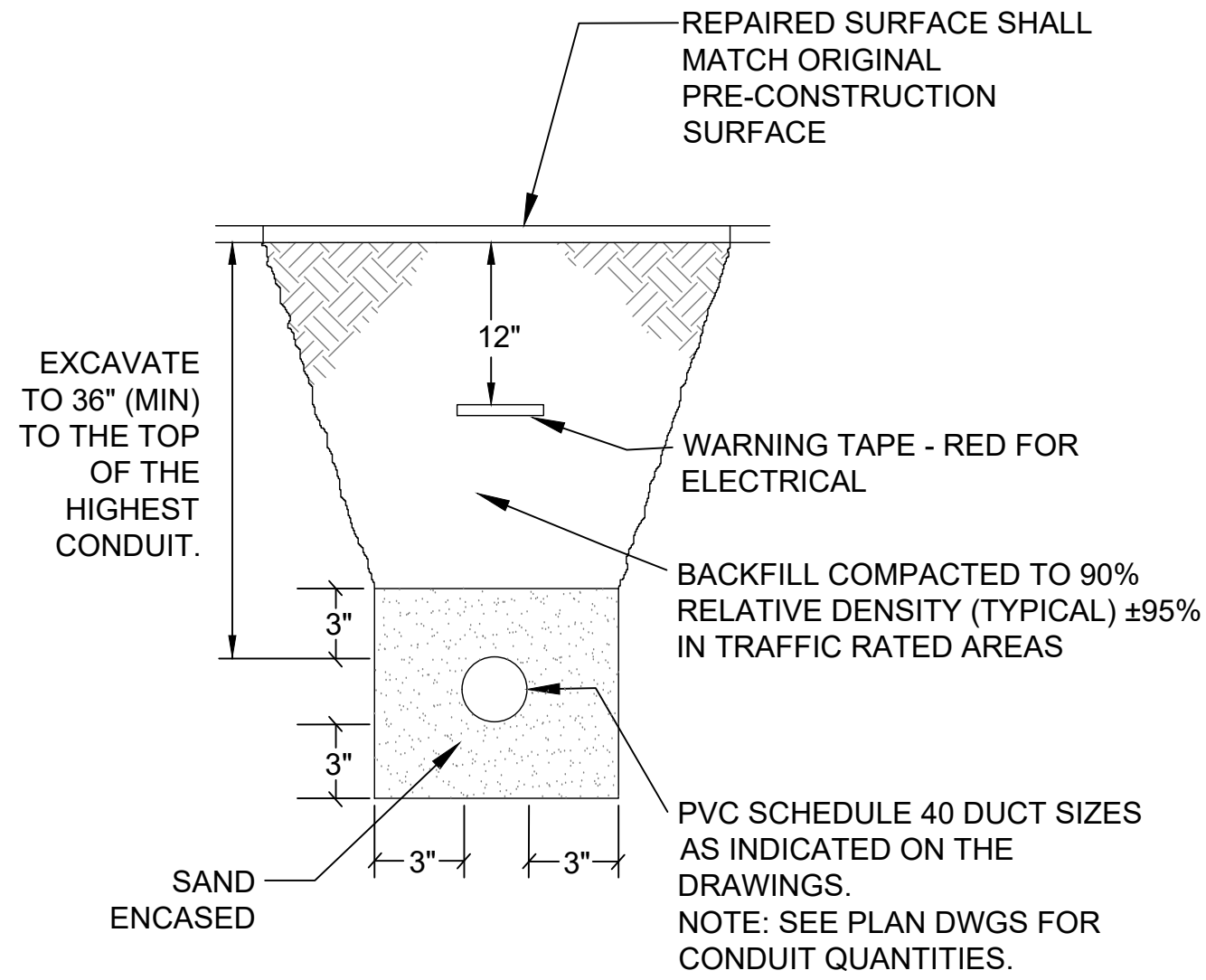
ROAD NO.	
FILE NO.	
SHEET	E1.2



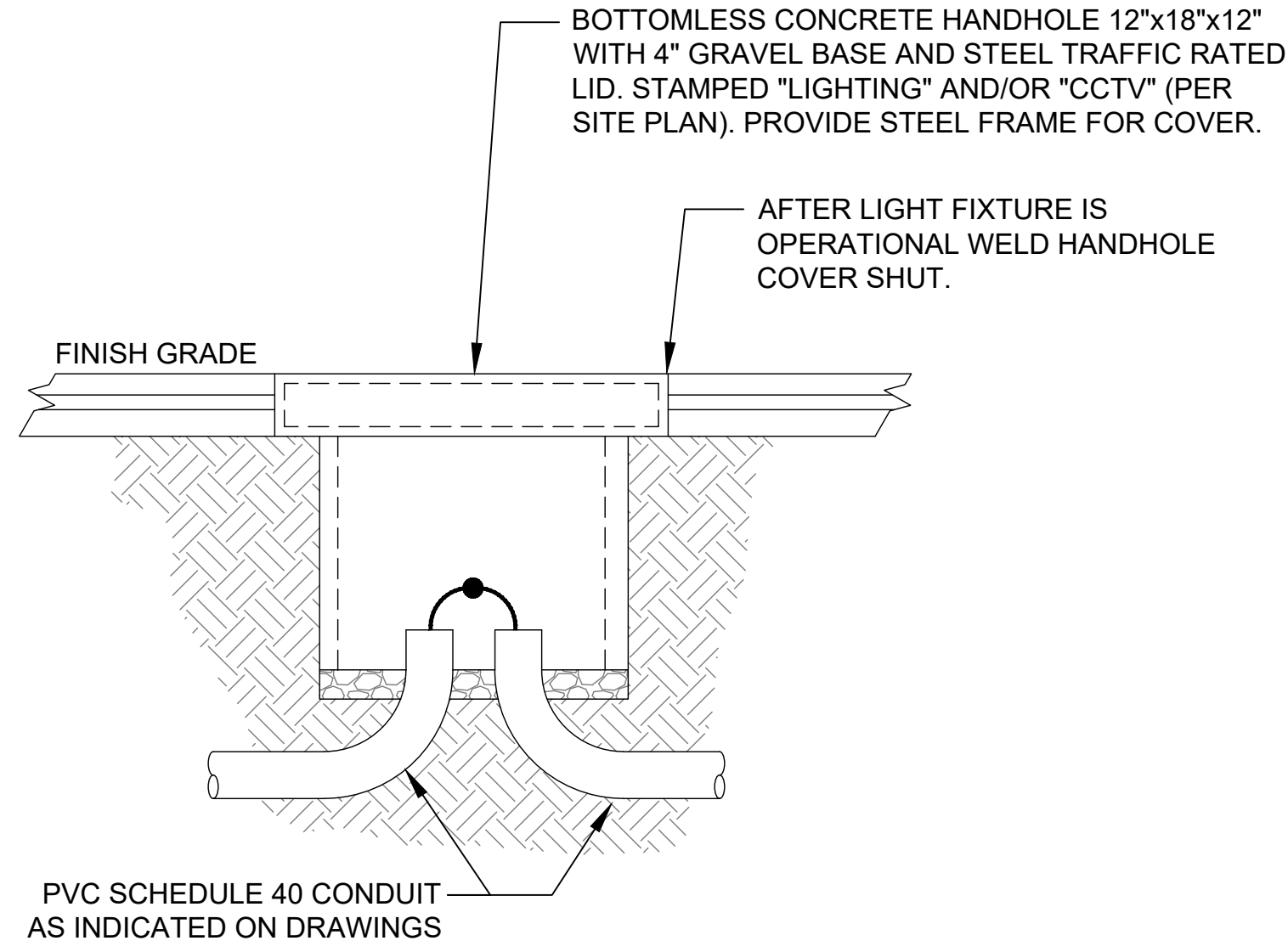
EPI THE ENGINEERING PARTNERS, INC.
CONSULTING ENGINEERS
E21213
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STATE OF CALIFORNIA

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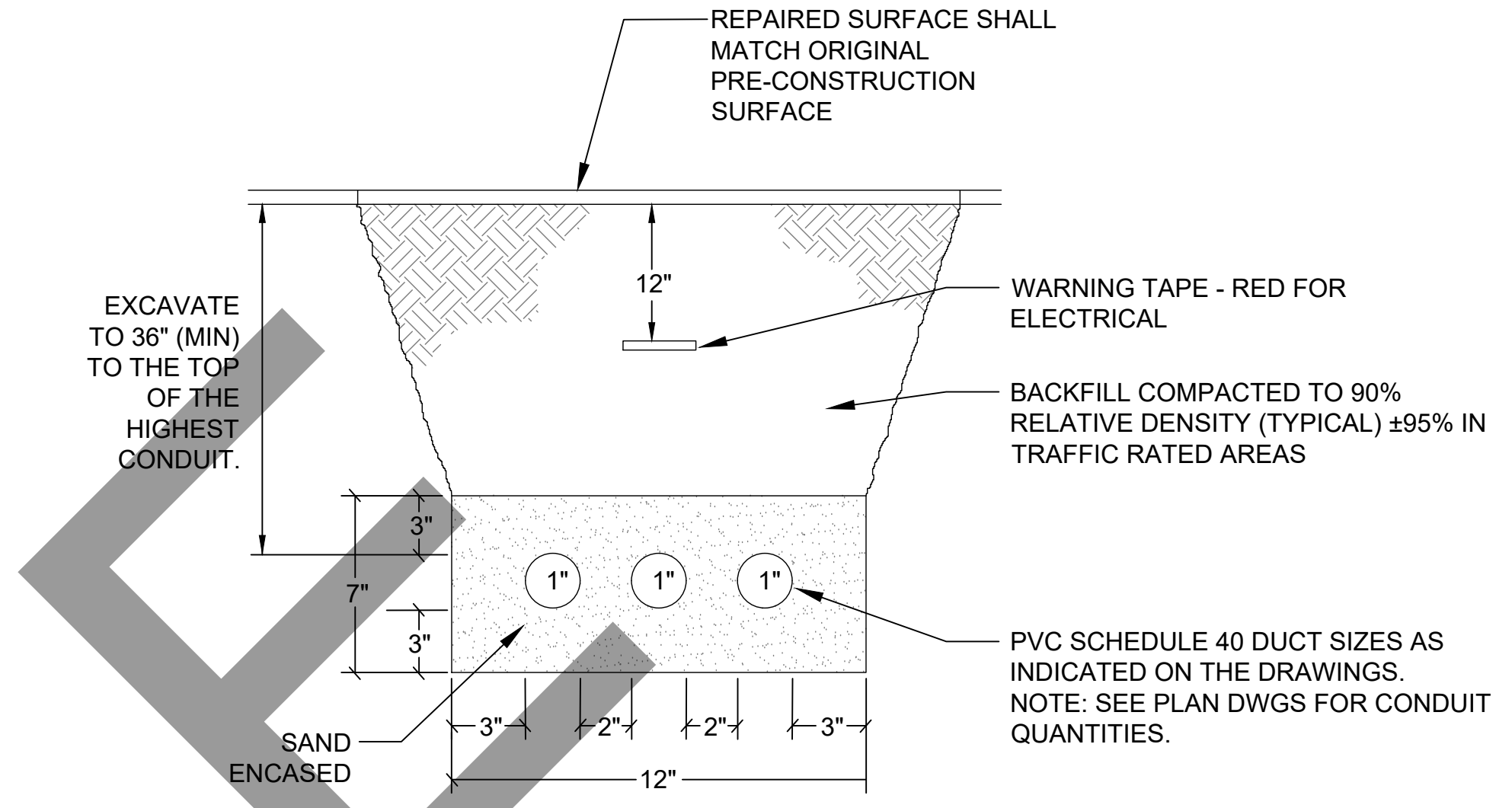
EPI PROJECT #173-121E



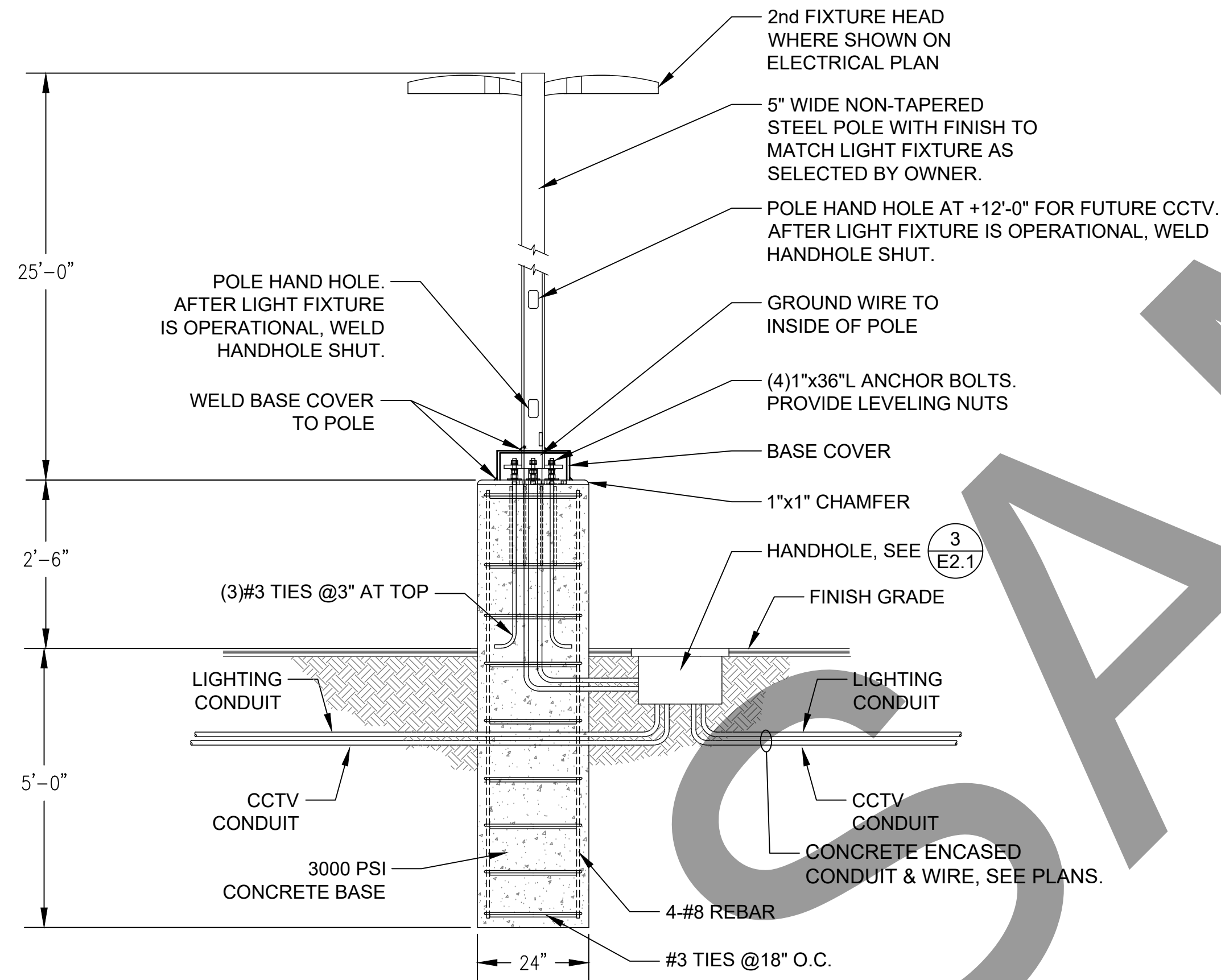
2 TRENCHING DETAIL
SCALE: NOT TO SCALE



3 HANDHOLE DETAIL
SCALE: NOT TO SCALE

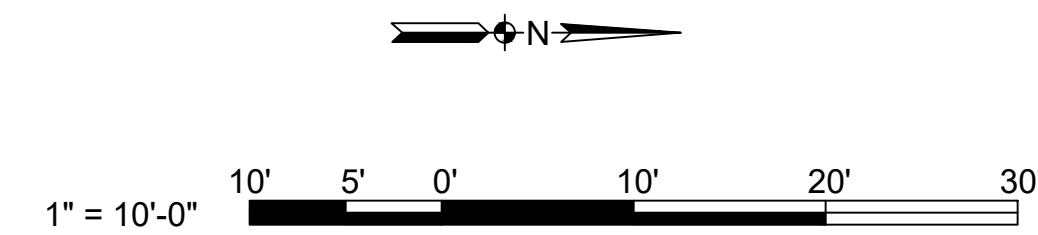


4 TRENCHING DETAIL
SCALE: NOT TO SCALE



1 LIGHT POLE BASE DETAIL
SCALE: NOT TO SCALE

OFFICE BUILDING - METER 222240-00609									
Customer Name	Current Rate	Meter Number	Service Street Address	City Name	Zip	Billing Month	Meter Read	STMT Rate	Kwh Usage
San Bernardino, County of	Domestic	222240-000609	133 Bradshaw Drive	Barstow	92311	Jan 2020	1/17/2020	Domestic	35
						Feb 2020	2/18/2020		58
						Mar 2020	3/18/2020		101
						Apr 2020	4/16/2020		53
						May 2020	5/18/2020		66
						Jun 2020	6/17/2020		34
						Jul 2020	7/20/2020		37
						Aug 2020	8/18/2020		42
						Sep 2020	9/17/2020		39
						Oct 2020	10/19/2020		35
						Nov 2020	11/18/2020		32
						Dec 2020	12/18/2020		34
						Jan 2021	1/20/2021		36
						Feb 2021	2/18/2021		34



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ELECTRICAL DETAILS
BARSTOW PARKING LOT
PROJECT # 10.10.1133
COUNTY OF SAN BERNARDINO

ROAD NO.
FILE NO.
SHEET
E2.1