

BUREAU OF ENGINEERING

GENERAL NOTES:

- ALL WORK SHALL CONFORM TO THE LATEST EDITION & SUPPLEMENTS OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTIONS (SSPWC, GREEN BOOK) ADOPTED BY THE BOARD OF PUBLIC WORKS OF THE CITY OF LOS ANGELES AND AS MODIFIED BY THE CORRESPONDING ISSUE OF THE CITY OF LOS ANGELES' BROWN BOOK (EDITIONS AND AMENDMENTS TO THE SSPWC). ALL REFERENCES TO THE SSPWC IN THESE NOTES SHALL BE UNDERSTOOD TO INCLUDE THE BROWN BOOK.
- A COPY OF THIS APPROVAL INCLUDING APPROVED PLANS AND THE LADOT APPROVED WORKSITE TRAFFIC CONTROL PLAN MUST BE KEPT ON THE JOB SITE AND AVAILABLE FOR INSPECTION BY CITY PERSONNEL AT ALL TIMES.
- CALL UNDERGROUND SERVICE ALERT (U.S.A.) AT LEAST 48 HOURS PRIOR TO START IF WORK: 1-800-227-2600
- BUREAU OF CONTRACT ADMINISTRATION INSPECTION WORK MUST BE REQUESTED NO LATER THAN NOON OF PRECEDING WORK DAY. FOR INSPECTION, PLEASE CALL DISPATCH AT: (213) 485-5000 DISPATCH HOURS ARE 7:00 A.M. TO 3:30 P.M.
- CALL FOR INSPECTION OF PERMANENT RESURFACING NO LATER THAN NOON OF THE PRECEDING WORK DAY
- ALL CHANGES IN SKETCHES AND PERMIT LIMITS MUST HAVE PRIOR APPROVAL BY THE CITY'S BUREAU OF ENGINEERING.
- PEDESTRIAN AND VEHICULAR ACCESS MUST BE MAINTAINED AT ALL TIMES.
- IF BARRICADES AND PROTECTIVE DEVICES ARE NOT FURNISHED BY THE CONTRACTOR AS REQUIRED, THE CITY OF LOS ANGELES MAY, AT ITS OPTION, PROVIDE THEM FOR A FEE TO THE CONTRACTOR.
- TRAFFIC REQUIREMENTS: ALL TRAFFIC LANES IN MAJOR, SECONDARY, AND COLLECTOR DESIGNATED STREETS SHALL BE UNOBSTRUCTED FROM 6 A.M. TO 9 A.M. AND 3:30 P.M. TO 7 P.M. ADDITIONAL TRAFFIC LANES MAY BE CLOSED AT ALL OTHER TIMES WITH A LADOT APPROVED TRAFFIC CONTROL PLAN. ADDITIONAL LANE CLOSURE FOR A COLLECTOR OR LOCAL STREET MAY BE CLOSED PER THE W.A.T.C.H. MANUAL OR AN APPROVED TRAFFIC CONTROL PLAN.
- THE JOB SITE, INCLUDING TEMPORARY RESURFACING, MUST BE MAINTAINED BY THE PERMITTEE UNTIL PERMANENT RESURFACING IS COMPLETE.
- ALL PERMANENT RESURFACING MUST BE COMPLETED WITHIN THREE (3) WEEKS OF THE TEMPORARY RESURFACING OR THE COMPLETION OF THE JOB, WHICHEVER OCCURS FIRST.
- ALL PERMANENT RESURFACINGS MUST BE IDENTIFIED BY AN APPROVED MARKER TAG IDENTIFYING PERMITTEE AND THE YEAR THE WORK WAS COMPLETED. TAGS ARE TO BE PLACED AS CLOSE TO THE CURB AS POSSIBLE. FOR MIDDLE FOR LONGER EXCAVATIONS, TAG SHOULD BE PLACED AT 50' INTERVALS AND AT BOTH SIDES.
- THIS PERMIT EXPIRES 6 (SIX) MONTHS FROM THE DATE OF ISSUANCE UNLESS WORK HAS COMMENCED (LAMC 62.02)
- PERMITTEE SHALL STOP WORK AND CONTACT THE PERMITTING AGENCY PRIOR TO CUTTING OR EXCAVATING ANY DECORATIVE SIDEWALK, PAVEMENT, OR CROSSWALK.
- ANY DAMAGE TO DECORATIVE SIDEWALK, PAVEMENT, OR CROSSWALK MUST BE REPAIRED IN KIND OR RECONSTRUCTED IN KIND BY THE PERMITTEE, AS DIRECTED BY THE PERMITTING AGENCY, IN A MANNER SATISFACTORY TO THE CITY ENGINEER AND THE INSPECTOR OF PUBLIC WORKS.
- ISSUANCE OF A PERMIT DOES NOT INVALIDATE THE NEED TO GET APPROVALS OR PERMITS FROM OTHER GOVERNMENTAL AGENCIES THAT MAY HAVE JURISDICTION.
- NO CONSTRUCTION WORK WILL BE PERFORMED BETWEEN THE NIGHTTIME HOURS OF 9:00 P.M. AND 7:00 A.M. OF THE FOLLOWING DAY, BEFORE 8:00 A.M. OR AFTER 6:00 P.M. ON SATURDAY AND NATIONAL HOLIDAYS, ANYTIME ON SUNDAY, UNLESS A PERMIT GRANTED HOLIDAY, ANYTIME ON SUNDAY, UNLESS A PERMIT GRANTED FROM THE BOARD OF POLICE COMMISSIONERS IS OBTAINED (LAMC 41.40).
- CONTRACTOR SHALL CALL FOR A PRE-CONSTRUCTION JOB-SITE MEETING MINIMUM OF THREE DAYS PRIOR TO COMMENCING WORK.
- CONTRACTOR SHALL MARK IN THE FIELD ALL SEWERS AND STORM DRAIN FACILITIES PRIOR TO START AND PROTECT THEM DURING CONSTRUCTION
- CONTRACTOR SHALL VERIFY THAT NO RECENT SURFACING OF STREET HAS BEEN PERFORMED OR SCHEDULED BY MEANS OF THE DEPARTMENT OF PUBLIC WORKS INSPECTOR AND BUREAU OF STREET SERVICES PRIOR TO START OF WORK.
- ALL EXCAVATIONS SHALL BE OPEN CUT. OTHER METHODS INCLUDING HORIZONTAL DIRECTIONAL DRILLING (HDD), CUT AND BORE OR TUNNELING ARE NOT PERMITTED AS PART OF THIS PERMIT
- CONCRETE SIDEWALK PAVEMENT SHALL BE REMOVED TO NEATLY SAWS EDGES. SAW CUTS SHALL BE MADE TO A MIN. OF 1/2 INCHES. OF A SAW CUT IN CONCRETE PAVEMENT FALLS WITHIN 3 FEET OF A CONSTRUCTION JOINT, COLD JOINT, EXPANSION JOINT, OR EDGE, THE CONCRETE SHALL BE REMOVED TO JOINT OR EDGE. THE EDGE OF EXISTING CONCRETE PLACEMENT ADJACENT TO TRENCHES, WHERE DAMAGED, SUBSEQUENT LINES FOR THE PURPOSE OF PAVING THE DAMAGED PAVEMENT AREAS. SUCH SAW CUT SHALL BE WITHIN PARALLEL TO THE ORIGINAL SAW CUTS OR SHALL BE CUT ON AN ANGLE WHICH DEPARTS FROM ORIGINAL SAW CUT NOT MORE THAN ONE INCH IN EACH SIX INCHES.
- ALL UNDERGROUND VAULTS, MAINTENANCE HOLES AND STRUCTURES SHALL MEET CITY OF LOS ANGELES STANDARDS AND SPECIFICATIONS. SUBMIT SHOP DRAWINGS TO LABOE FOR REVIEW PRIOR TO FABRICATION.
- CONTRACTOR SHALL MAINTAIN MINIMUM STANDARD CLEARANCES BETWEEN PROPOSED LINES AND EXISTING SEWER AND STORM DRAIN FACILITIES
- EXCAVATION GREATER THAN FIVE FEET SHALL REQUIRE APPROVED SHORING.
- USE COMPACTED NATIVE OR APPROVED IMPORTED SOILS OR CONTROLLED LOW STRENGTH MATERIAL (CLSM) MATERIAL CLSM PER SSPWC 201-06 OR 100-E-100 TRENCH BACKFILL SLURRY PER SSPWC 201-1 AS BACKFILL MATERIALS
- ALL ASPHALT AND/OR CONCRETE PAVEMENT SHALL BE REPLACED PER THE SSPWC.
- IF PAVEMENT CUTS ARE MADE IN CONCRETE BUS PAD OR CONCRETE PAVEMENT, THE CONCRETE PAVEMENT SHALL BE REPLACED USING A TIED BUTT LONGITUDINAL CONSTRUCTION JOINT PER LA CITY STANDARD PLAN S-430-1.
- DEPTH OF COVER SHALL NOT BE LESS THAN 36 INCHES (FROM FINISH GRADE TO TOP OF PIPE)
- PERMIT HOLDER IS RESPONSIBLE TO OBTAIN ALL REQUIRED PERMITS, INCLUDING STREET USE PERMIT IF PROJECT REQUIRES USE OR OBSTRUCTION OF THE PUBLIC RIGHT OF WAY.
- TRAFFIC LANE REQUIREMENTS SHALL COMPLY WITH THE TRAFFIC CONTROL LETTER APPROVER BY LADOT.
- TRAFFIC CONTROL SHALL MEET THE REQUIREMENTS OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD) LATEST EDITION OR WORK AREA TRAFFIC CONTROL HANDBOOK (W.A.T.C.H.) MANUAL.
- PROVIDE BLANKET PROTECTION FOR CROSSING PIPES AS PER CITY OF LOS ANGELES STANDARDS PLAN S-255-1 WHEN LESS THAN 18 INCH VERTICAL CLEARANCE
- ALL UTILITY POLES, INCLUDING NEW OR EXISTING POLES TO REMAIN OR TO BE REPLACED, ARE EXCLUDED FROM THIS PERMIT.
- QUESTIONS REGARDING LANE CLOSURE HOURS, SATURDAY OR SUNDAY WORK MAY BE REFERRED TO THE DEPARTMENT OF TRANSPORTATION.

- ASPHALT TRENCH NOTES:**
- ASPHALT TRENCH SHALL BE 12" IN WIDTH AND HAVE A DEPTH OF 36" MIN.
 - TRENCH BACKFILL AND AC PAVEMENT RESURFACING SHALL FOLLOW THE LATEST VERSION OF LA CITY STD. PLAN S-477-2

PLAN REFERENCES:
 CADASTRAL MAP NO.
 STORM DRAIN PLAN NO.
 SEWER PLAN NO.
 SUBSTRUCTURE MAP NO.
 THOMAS GUIDE PG.

CLIENT NAME

PROJECT TITLE

SITE LOCATION

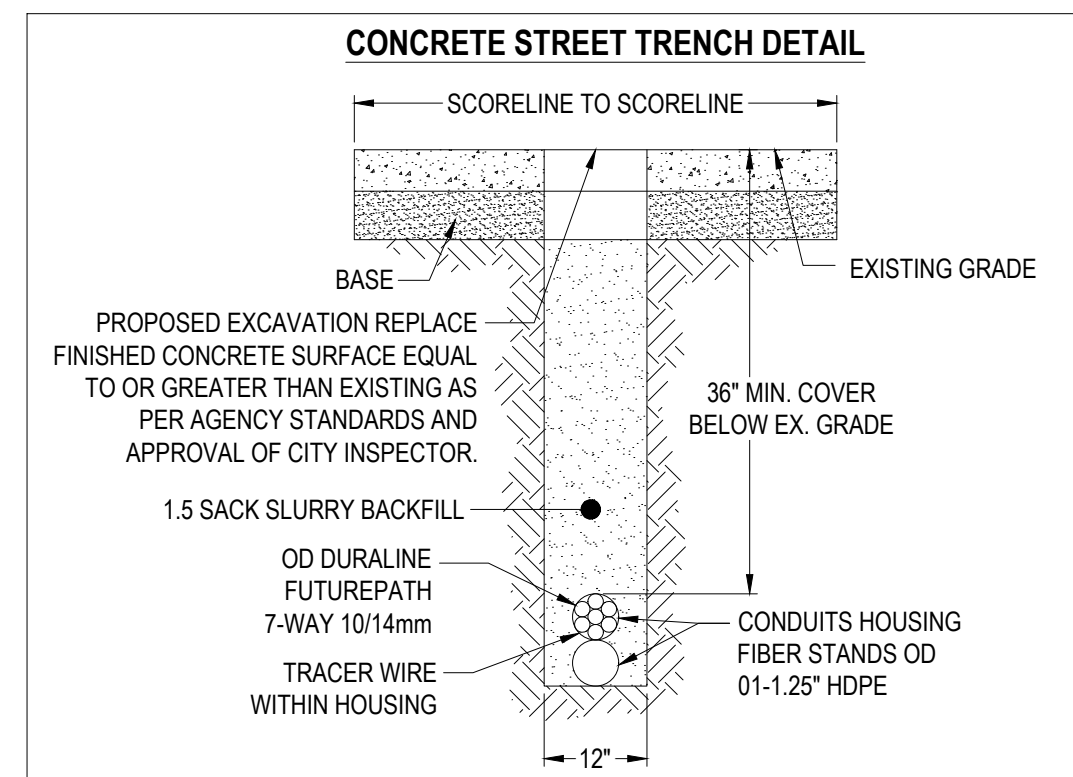
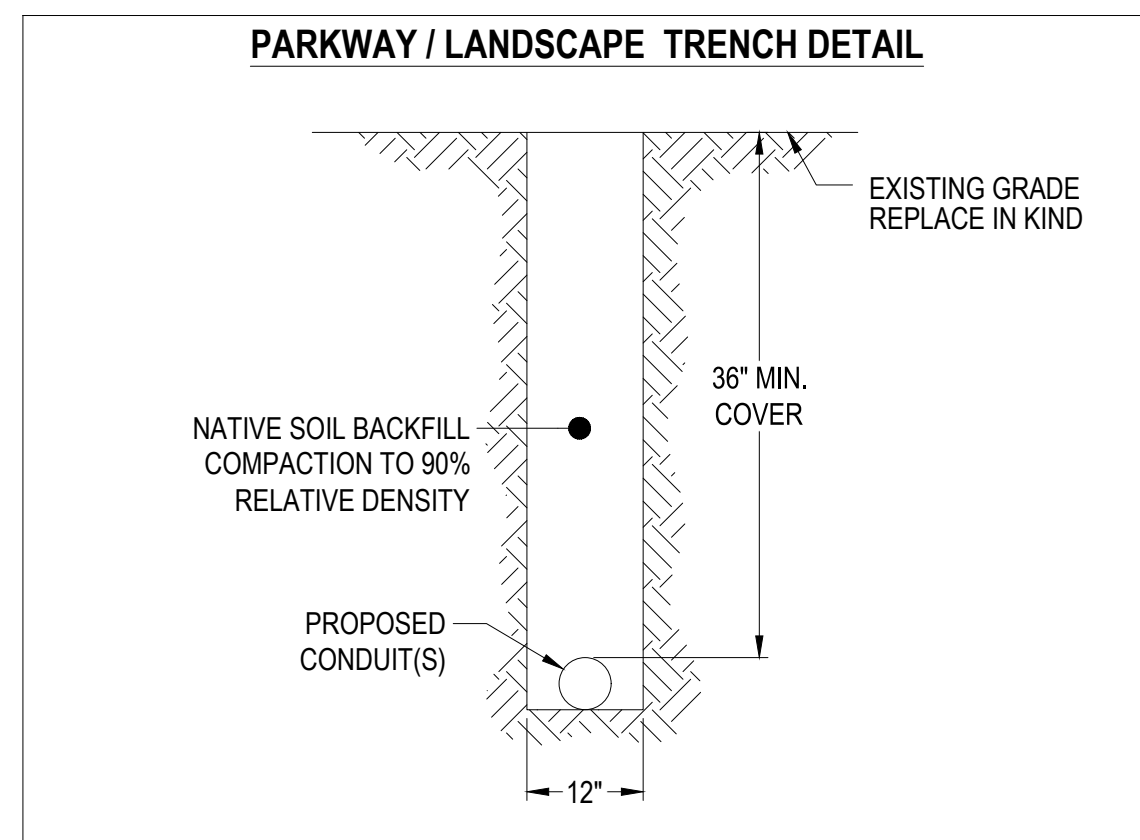
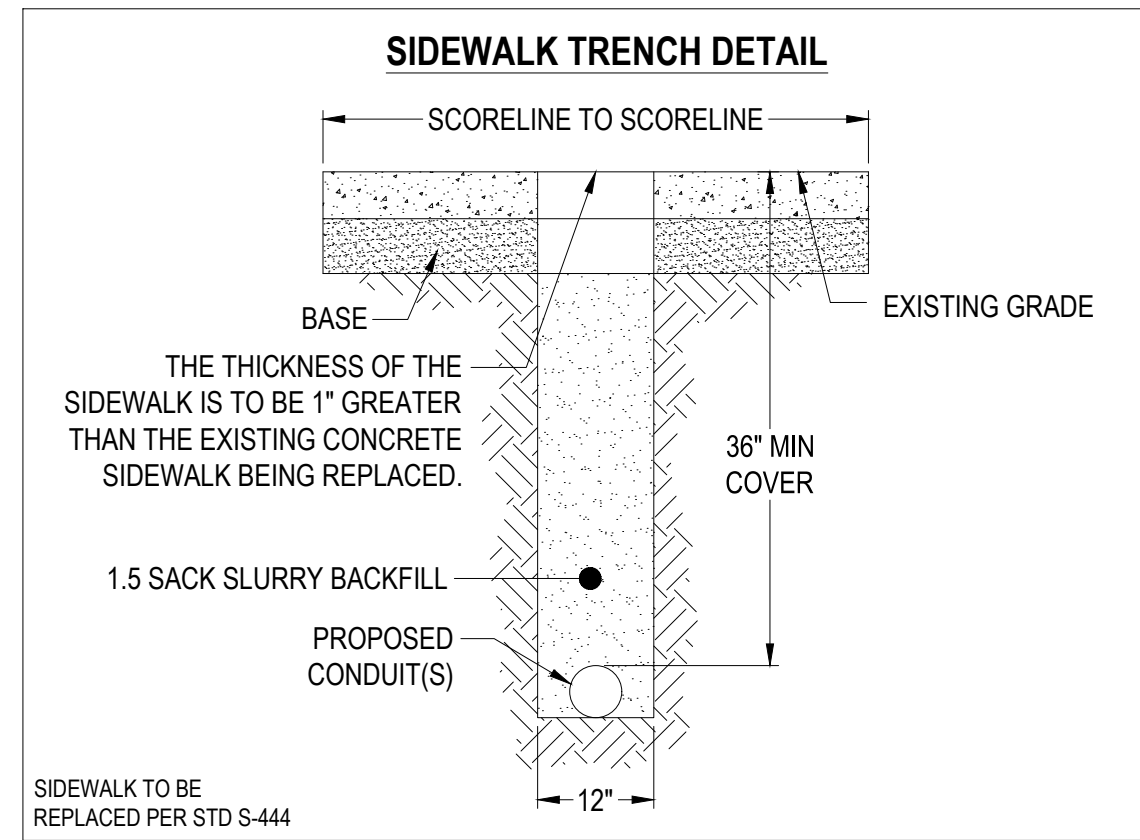
STREET LIGHTING NOTES TO THE CONTRACTOR

THE CONTRACTOR SHALL PROTECT AND MAINTAIN ALL STREET LIGHTING FACILITIES EXISTING IN THE WORK AREA. SHOULD ANY DAMAGE TO THE STREET LIGHTING OCCUR, CONTRACTOR SHALL IMMEDIATELY NOTIFY THE BUREAU OF STREET LIGHTING, FIELD OPERATIONS DIVISION AT (323) 913-4743. AFTER 4:30 PM MONDAY THROUGH THURSDAY, OR 3:30 PM ON FRIDAY, CONTACT THE ELECTRIC TROUBLE BOARD OF THE DEPARTMENT OF WATER AND POWER AT (800) 821-5278 FROM THE (213) AREA CODE, OR (800) 821-8579 FROM THE (818) AREA CODE.

THE CONTRACTOR SHALL ARRANGE FOR THE IMMEDIATE REPAIR AND RESTORATION OF THE DAMAGED STREET LIGHTING SYSTEM AT NO COST TO THE CITY. A LICENSED ELECTRICAL CONTRACTOR IS REQUIRED TO MAKE ALL REPAIRS NECESSARY TO THE STREET LIGHTING FACILITIES.

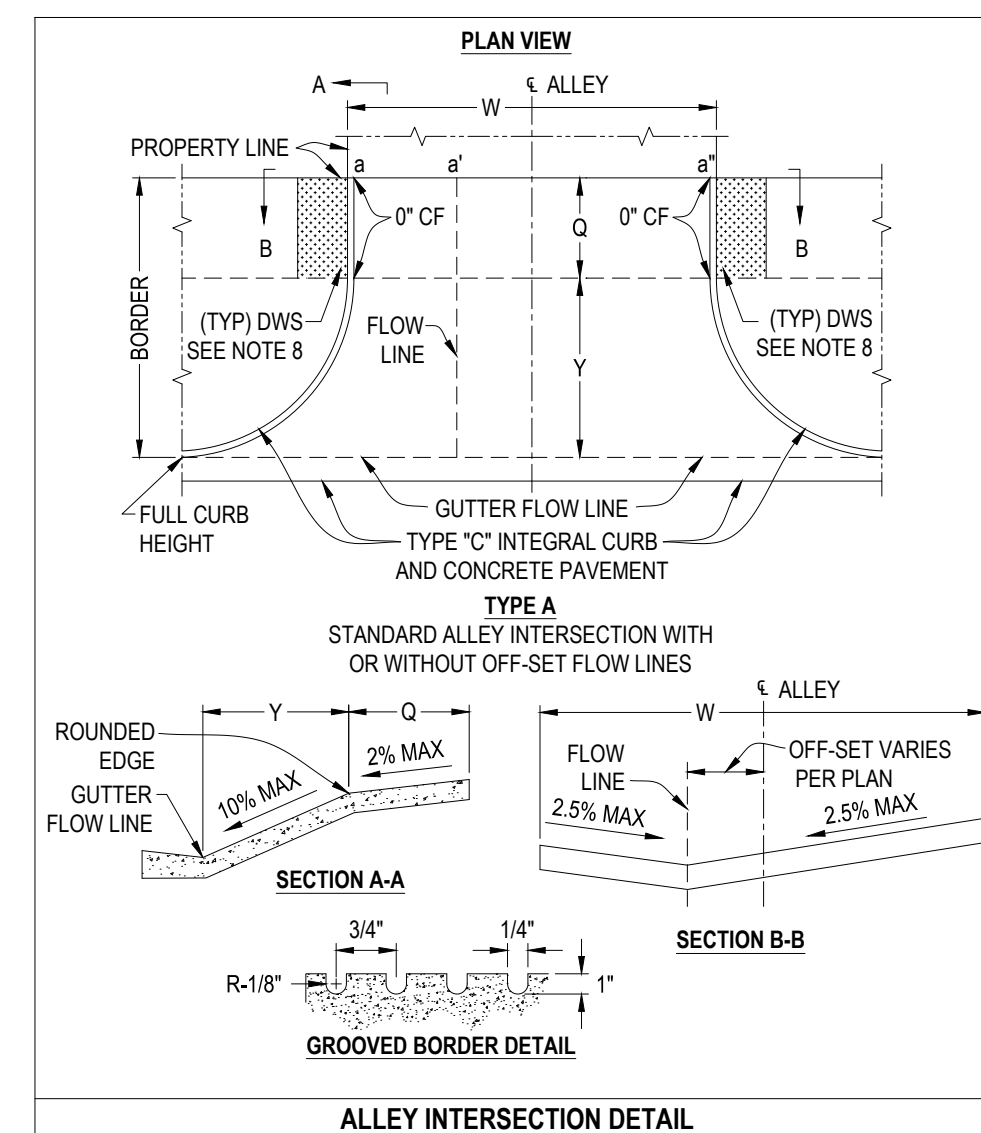
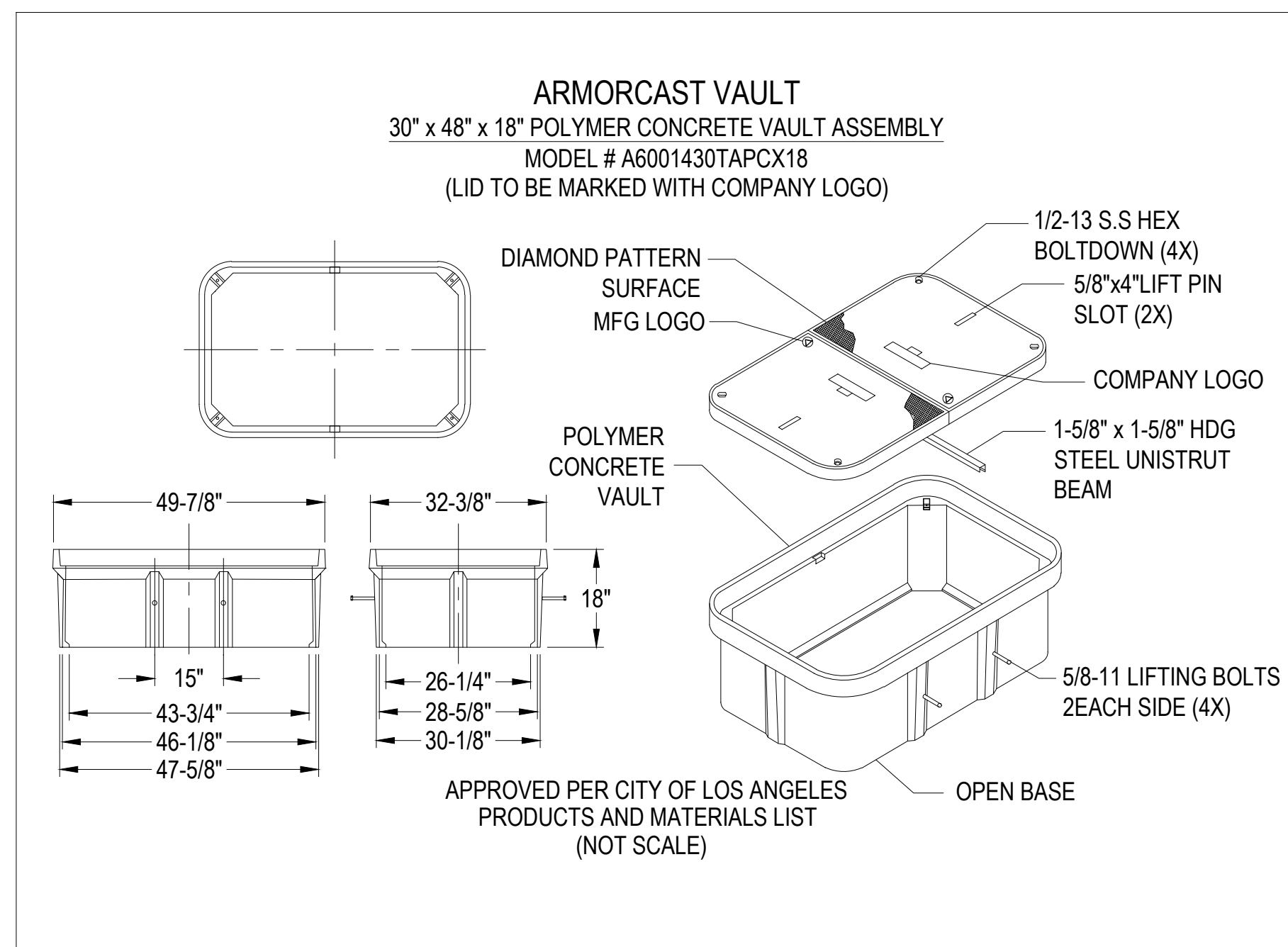
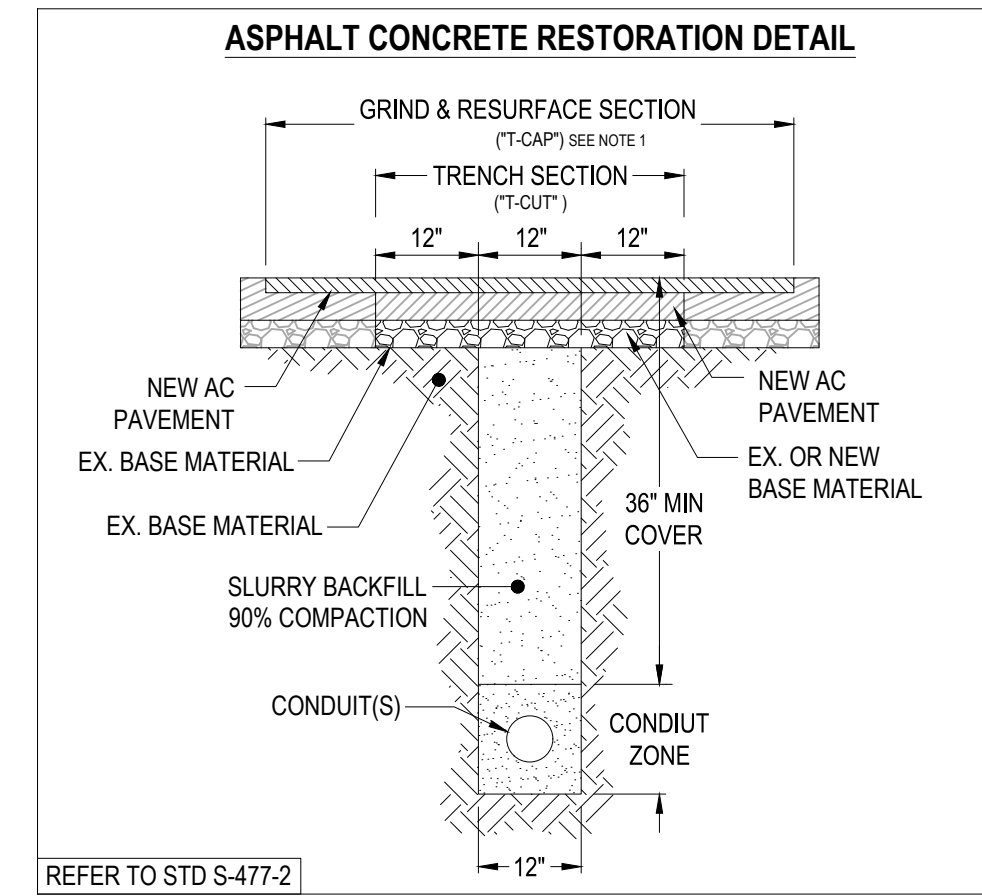
THE CONTRACTOR SHALL INSTALL ALL THE PROPOSED FACILITIES 12 INCHES CLEAR OF THE STREET LIGHTING FOUNDATIONS, PULLBOXES, AND CONDUITS, EXCEPT WHERE OTHERWISE STATES HERIN. TWO BUSINESS DAYS PRIOR TO WORKING NEAR THE STREET LIGHTING CIRCUIT THE CONTRACTOR SHALL ARRANGE FOR THE PRESENCE OF A CITY OF LOS ANGELES, PUBLIC WORKS INSPECTOR, (213) 485-5080 OR (818) 374-1188 TO VERIFY ALL CLEARANCE REQUIREMENTS ARE MET. WHERE A CONFLICT EXISTS BETWEEN THE STREET LIGHTING FACILITIES AND THE PROPOSED IMPROVEMENTS, APPROVAL FOR RELOCATION OF THE STREET LIGHTING FACILITIES MAY BE OBTAINED BY CONTRACTING THE STREET LIGHTING ENGINEER AT (213) 847-1817.

THE CONTRACTOR SHALL PROCEED WITH EXTREME CAUTION WHEN WORKING NEAR THE HIGH VOLTAGE SERIES CIRCUIT UNAUTHORIZED WORK ON THE SERIES CIRCUIT CAN RESULT IN SEVERE INJURY OR DEATH. THE CONTRACTOR SHALL NOTIFY THE BUREAU OF STREET LIGHTING, FIELD OPERATIONS DIVISION (323) 913-4743 TWO BUSINESS DAYS PRIOR TO WORKING NEAR THE STREET LIGHTING CIRCUIT.

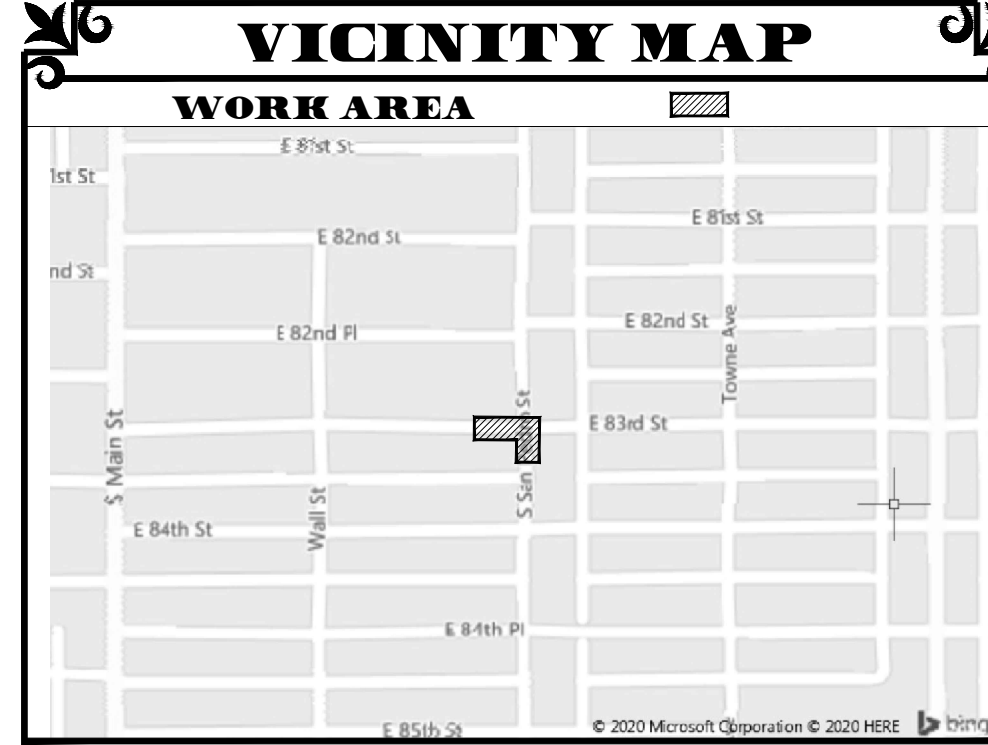


- NOTES:**
- SAWCUT TO THE NEAREST JOINT/EDGE WITHIN 3 FEET OF THE TRENCH PER GREENBOOK SECTION 300-1.3.2 (b)
 - INSTALL 30" DOWEL BARS AT 30" ON CENTER (TYPICAL) SEE STANDARD PLAN S-430-1.
 - USE OF EPOXY ADHESIVE (HILTI HY 150 EQUIVALENT OR BETTER).
 - PLACEMENT OF 4,000 PSI COMPRESSIVE STRENGTH CONCRETE (660-C-4000 EQUIVALENT) PER BROWN BOOK SPECIFICATIONS FOR HIGH EARLY STRENGTH CONCRETE.
 - NEW PAVEMENT THICKNESS TO BE 1" GREATER IN THICKNESS THAN EXISTING CONDITION PER GREENBOOK SECTION 306-1.5.2.
 - ADDITIONAL CONCRETE PAVEMENT REQUIREMENTS PER GREENBOOK AND BROWNBOOK SECTION 302-6.

- SCOPE OF WORK:**
- INSTALL (2) 30"x48" VAULT
 - INSTALL 71' OF (1) - 3" CONDUIT VIA HAND DIG / OPEN TRENCH FROM PROPOSED VAULT TO EXISTING POLE
 - INSTALL 4' OF (1) - 3" CONDUIT VIA CONCRETE TRENCH PROPOSED VAULT TO EXISTING POLE
 - INSTALL 17' OF (1) - 3" CONDUIT VIA ASPHALT TRENCH FROM PROPOSED VAULT TO EXISTING POLE
 - INSTALL 10' OF (2) - 1.25" CONDUITS VIA HAND DIG / OPEN TRENCH
 - INSTALL 3' OF (2) - 1.25" CONDUITS VIA HAND DIG UNDER CURB & GUTTER
 - INSTALL 173' OF (2) - 1.25" CONDUITS VIA MICRO TRENCH BETWEEN PROPOSED VAULTS
 - INSTALL 52' OF (2) - 1.25" CONDUITS VIA CONCRETE CUT BETWEEN PROPOSED VAULTS
 - INSTALL 3' OF (1) - 2", CONDUIT VIA HAND DIG / OPEN TRENCH FROM PROPOSED VAULT TO EXISTING HANDHOLE.



- ALLEY INTERSECTION NOTES**
- 1/2" THREE INCHES IN ALL TYPES UNLESS OTHERWISE SPECIFIED
 - CONCRETE SURFACE FOR FOUR INCHES ON EACH SIDE OF GUTTER FLOW LINE SHALL BE GIVEN A STEEL TROWEL FINISH. THE REMAINDER OF THE NEW CONCRETE ALLEY INTERSECTION SHALL BE GIVEN A WOOD FLOAT FINISH WITH SWIRL/ROTARY SURFACE TEXTURE.
 - CURB RETURNS SHALL HAVE A RADIUS (R) OF 12 FEET OR THE WIDTH OF THE BORDER, WHICHEVER IS SMALLER. CURB RETURN RADI SHALL NOT EXCEED BORDER WIDTH.
 - CONCRETE PAVEMENT SHALL BE 6 INCHES THICK OVER 6 INCHES CRUSHED MISCELLANEOUS BASE MATERIAL UNLESS OTHERWISE SPECIFIED AND APPROVED BY CITY ENGINEER.
 - "Q" SHALL BE 4 MINIMUM AT 2% MAXIMUM CROSS SLOPE.
 - CURB FACE HEIGHT SHALL BE VARIABLE WITHIN "Y" AREA.
 - "Y" SHALL HAVE A MAXIMUM SLOPE OF 10% WHERE BORDERS HAVE A DIMENSION THAT RESULTS IN A "Y" SLOPE GREATER THAN 10% ALLEY INTERSECTION AREA MUST BE CHECKED FOR SAFE VEHICULAR PASSAGE TO THE SATISFACTION OF THE CITY ENGINEER.
 - IF ALLEY IS SIGNALIZED OR HAS YIELD OR STOP CONTROLS, DETECTABLE WARNING SURFACE (DWS) SHALL BE INSTALLED AS SHOWN ON BOTH SIDES OF THE ALLEY. SEE LATEST VERSION OF STANDARD PLANS S-442 AND S-501 FOR DWS DETAILS.
 - RAMP SHALL HAVE A 12 INCH WIDE GROOVED BORDER AS SHOWN IN THE PLANE OF THE SIDEWALK WITH 1/4" GROOVES AT 3/4" ON CENTER, SEE GROOVED BORDER DETAIL. THE SURFACE OF THE BORDER SHALL HAVE A FINE, HAIR BROOMED FINISH.
 - PROVIDE A LEVEL LANDING BEYOND THE BOTTOM GRADE BREAK OF EACH RAMP, WITH A CLEAR SPACE AS WIDE AS THE RAMP AND 48" DEEP MINIMUM WITH SLOPES AT 2% MAXIMUM IN BOTH DIRECTIONS AND WHOLLY OUTSIDE THE ALLEY VEHICULAR TRAVEL WAY.



PREPARED BY:
O-S-Pro
 Telecom Solutions, LLC
 2001 THIRD ST #H, RIVERSIDE, CA 92507
 (626) 320-0996 | peterm@ospro.net

LEGEND
PROPOSED WORK

SYMBOL/LINETYPE	DESCRIPTION
[Symbol]	CONCRETE RESTORATION
[Symbol]	ASPHALT RESTORATION
[Symbol]	PROPOSED TRENCH
[Symbol]	PROPOSED MICRO TRENCH
[Symbol]	DESIGN SUBMITTED TO ANOTHER AGENCY
[Symbol]	PROPOSED UNDERGROUND VAULT
[Symbol]	POTHOLE
[Symbol]	EXPOSE UTILITY

EXISTING STRUCTURES

SYMBOL/LINETYPE	ABV.	DESCRIPTION
[Symbol]	POLE	UTILITY POLE
[Symbol]	MH	MANHOLE
[Symbol]	HH	HAND HOLE
[Symbol]	PED	PEDESTAL
[Symbol]	F/H	FIRE HYDRANT
[Symbol]	VLV	VALVE
[Symbol]	TS	TRAFFIC SIGNAL
[Symbol]	SL	STREET LIGHT
[Symbol]	VNT	VENT
[Symbol]	MTR	WATER METER
[Symbol]	TR	BOLLARD
[Symbol]		TREE

EXISTING UTILITIES

SYMBOL/LINETYPE	DESCRIPTION
[Symbol]	STREET LIGHT CONDUIT
[Symbol]	ELECTRIC
[Symbol]	TELEPHONE
[Symbol]	GAS
[Symbol]	STORM DRAIN
[Symbol]	SANITARY SEWER
[Symbol]	WATER
[Symbol]	CATV
[Symbol]	TRAFFIC CONDUIT
[Symbol]	COMM

MISC. LINE TYPES

SYMBOL/LINETYPE	ABV.	DESCRIPTION
[Symbol]	C/L	CENTER LINE
[Symbol]	R/W	RIGHT OF WAY
[Symbol]	P/L	PROPERTY LINE
[Symbol]	EOP	EDGE OF PAVEMENT
[Symbol]	FOC	FRONT OF CURB
[Symbol]	C&G	CURB & GUTTER
[Symbol]	R/R	RAILROAD

MISC. ABBREVIATIONS

ABBV.	DESCRIPTION
BCF	BEHIND CURB FACE
FCF	FRONT OF CURB FACE
CONC.	CONCRETE
EX	EXISTING
U/G	UNDERGROUND
S/W	SIDEWALK
D/W	DRIVEWAY
FL	PLACE (INSTALL NEW)

NOTICE TO CONTRACTORS
 THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES SHOWN HERE WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. CONTRACTOR IS REQUIRED TO LOCATE AND POT HOLE ALL EXISTING UTILITY CROSSINGS PRIOR TO CONSTRUCTION.

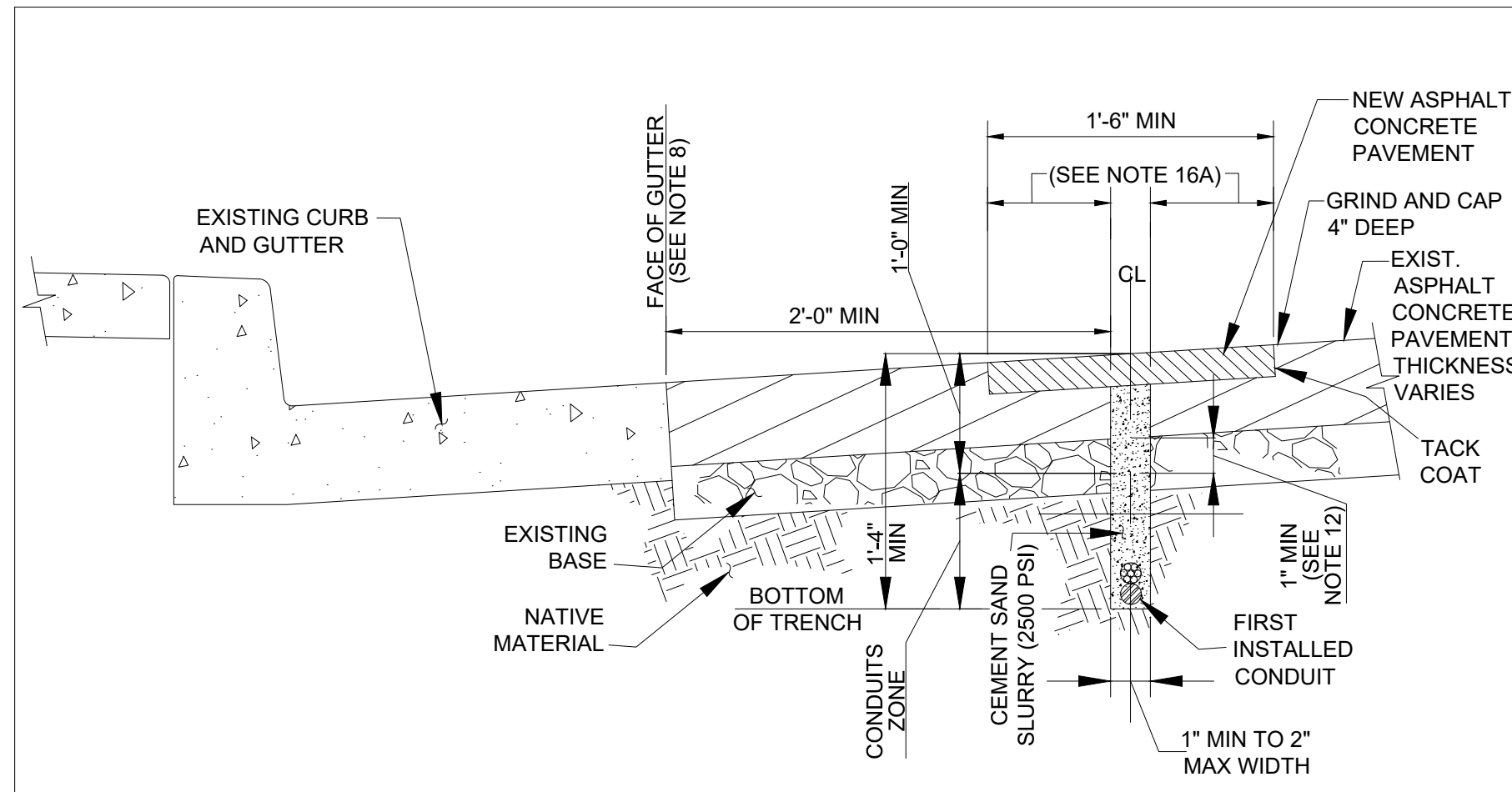
DIGALERT
 CALL TOLL FREE
 48 HOURS BEFORE YOU DIG
 UNDERGROUND SERVICE ALERT
 PHONE NO. 811

CONSTRUCTION PLAN

CLIENT INFORMATION	DRAWN	OSPRO
STREET ADDRESS	DESIGN	OSPRO
CITY, STATE	CHECKED	OSPRO
PROJECT TITLE	DATE	XX/XX/2020
SITE LOCATION		

PROJECT #	TRACKING #	REV
XXXXXX	XXXXXXXXXXXXXXXXXX	0

MICRO TRENCH STANDARDS



TYPICAL MICROTRENCH SECTION
(INTEGRAL CURB AND GUTTER SHOWN)

NOTES:

ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC) "GREENBOOK" ADOPTED BY THE BOARD OF PUBLIC WORKS AS AMENDED BY THE LATEST CORRESPONDING CITY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS "BROWNBOOK".

GENERAL

- MICRO-TRENCHING SHALL ONLY BE USED TO INSTALL TELECOMMUNICATION CONDUITS.
- MICRO-TRENCHING SHALL NOT BE ALLOWED IN CONCRETE PAVED STREETS, NOR SIDEWALKS, PARKWAYS, CURBS AND GUTTERS.
- THE CONTRACTOR SHALL IDENTIFY ALL EXISTING UTILITIES, INCLUDING SERVICE CONNECTIONS IN THE FIELD. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (U.S.A.) AT LEAST 48 HOURS PRIOR TO START OF WORK AT 8-1-1, OR TOLL-FREE AT 1-800-422-4133. THE CONTRACTOR SHALL FURTHER SUPPLEMENT THE FINDINGS OF U.S.A. TO DETERMINE THE EXACT LOCATIONS AND DEPTHS OF ALL UTILITIES BY USING A MOBILE GROUND PENETRATING RADAR SYSTEM. THE CONTRACTOR SHALL POTHOLE ALL CROSSING UTILITIES AND PARALLEL UTILITIES WITHIN 18-INCHES OF THE PROPOSED ALIGNMENT TO A DEPTH OF 6-INCHES BELOW THE BOTTOM OF THE MICRO-TRENCH, TO DETERMINE THE EXISTING UTILITY ALIGNMENT AND ELEVATION. POTHOLES SHALL BE IMMEDIATELY BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS OR RESTORED AS DIRECTED BY THE ENGINEER.
- IF EXISTING UTILITIES ARE DAMAGED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE INSPECTOR, ENGINEER AND UTILITY OWNER TO PERFORM THE REPAIRS PROMPTLY ACCORDING TO THEIR REQUIREMENTS AND PER ASSOCIATED CITY PERMITS.
- THE FOLLOWING ITEMS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR APPROVAL:
 - PROVIDE A DETAILED SITE PLAN PER THE LATEST EXCAVATION "U" PERMIT CHECKLIST FOUND IN THE DEVELOPMENT SERVICES PROCEDURES MANUAL.



NOT TO SCALE

BUREAU OF ENGINEERING		DEPARTMENT OF PUBLIC WORKS		CITY OF LOS ANGELES	
MICROTRENCHING				STANDARD PLAN S-474-0	
PREPARED	SUBMITTED	APPROVED	SUPERSEDES	REFERENCES	
KEVIN ARCE BUREAU OF ENGINEERING	EDWARD HARRINGTON, S.E. ENGINEER OF DESIGN	<i>Larry Lee Moore</i> GARY P. MOORE, P.E. CITY ENGINEER			
CHECKED		06/02/2020			
BENET GARDNER, P.E. BUREAU OF ENGINEERING	KENNETH R. REDD, P.E. DEPUTY CITY ENGINEER		VAULT INDEX NUMBER: B-4788		
			SHEET 1 OF 3 SHEETS		

NOTES: (CONTINUED)

B. A STREET CROSS-SECTION THAT INCLUDES THE FOLLOWING INFORMATION:

- THE CURB AND GUTTER, ASPHALT CONCRETE (AC) ROADWAY APPROXIMATE THICKNESS, BASE, DEPTH AND WIDTH OF MICRO-TRENCH, DEPTH OF TOPMOST CONDUIT, DISTANCES OF MICRO-TRENCH TO FACE OF GUTTER, CURB, CONCRETE PAVEMENT OR STRUCTURE AS APPLICABLE, AND BACKFILL MATERIAL.
 - AC REINSTATEMENT INCLUDING WIDTH AND DEPTH OF GRIND AND CAP, STARTING FROM GUTTER FACE, CURB, SLAB OR STRUCTURE AS APPLICABLE.
- C. DETAIL SHOWING CONDUIT FROM MAIN MICRO-TRENCH ALIGNMENT TO LATERAL SURFACE CONNECTIONS INCLUDING TO ANY JUNCTION/PULL BOX. INCLUDE SPECIFIC INFORMATION OF DEPTH, SIZE, AND METHOD OF EXCAVATION BELOW EXISTING CURB AND GUTTER.**
- D. CUT SHEETS OF THE PROPOSED EQUIPMENT PARTICULARLY SUITABLE FOR MICRO-TRENCHING, INCLUDING:**
- MICRO-TRENCHER CAPABLE OF MEETING TARGET DEPTH AND WIDTH IN A SINGLE PASS WITH AN INTEGRAL HOOD AND ASSOCIATED VACUUM SYSTEM. SELECTION OF CUTTING WHEEL SHALL BE SUCH THAT IT MINIMIZES DAMAGE TO THE ADJACENT AC SURFACE.
 - MOBILE CONCRETE/SLURRY PLACEMENT WITH AN ON-BOARD VIBRATOR AND NARROW TROUGH TO MATCH MICRO-TRENCH WIDTH.
 - MOBILE GROUND PENETRATING RADAR SYSTEM THAT IS CAPABLE OF LOCATING BOTH METALLIC AND NON-METALLIC PIPES AND CABLES TO A DEPTH OF 24-INCHES.
- E. OTHER SITE SPECIFIC ITEMS AS REQUIRED BY THE ENGINEER.**

LIMITS OF REMOVALS, TRENCH WIDTH, AND LOCATION

- THE MICRO-TRENCH SHALL BE CONSTRUCTED WITH CONTINUOUS UNIFORM STRAIGHT AND NEAT EDGES.
- MICRO-TRENCH ALIGNMENTS SHALL CONSIST OF RUNS PARALLEL TO THE CENTERLINE OF THE STREET. STREET CROSSING MAY BE DONE PROVIDED THE ALIGNMENT IS PERPENDICULAR TO THE STREET CENTERLINE TO THE EXTENT POSSIBLE.
- THE EDGE OF THE MICRO-TRENCH SHALL BE A MINIMUM OF 24-INCHES FROM THE EXISTING FACE OF THE GUTTER, EXISTING CONCRETE STRUCTURE, OR CURB IF GUTTER IS NOT PRESENT.
- THE MICRO-TRENCH WIDTH SHALL BE A MINIMUM OF 1-INCH AND A MAXIMUM OF 2-INCHES.
- MICRO-TRENCHING MAY BE PERMITTED UPON THE ENGINEER'S DISCRETION ON SPECIAL PAVEMENTS SUCH AS DECORATIVE ASPHALT PAVING, AND THROUGH EXISTING IMPROVEMENTS SUCH AS PERPENDICULAR TO SPEED BUMPS. SPECIAL PAVEMENTS AND EXISTING IMPROVEMENTS SHALL BE RESTORED IN KIND AS APPROVED BY THE ENGINEER. HOWEVER, MICRO-TRENCHING THROUGH EXISTING CURB, GUTTER, CROSS GUTTER, BUS PAD, SIDEWALK, FLOATING CURB EXTENSION, BUS BULB, TRUCK PILLOW, RAISED CROSSWALK, ISLAND, MINI-ROUNDOABOUT, OR SIMILAR ELEMENTS IS NOT PERMITTED.
- UP TO TWO (2) VERTICALLY STACKED CONDUITS CAN BE PLACED WITHIN A MICRO-TRENCH.
- THE CONDUIT SHALL BE INSTALLED AT A MINIMUM DEPTH OF 12-INCHES BELOW THE EXISTING AC PAVEMENT SURFACE, AT LEAST 1-INCH BELOW THE BOTTOM OF THE AC PAVEMENT, AND THE BOTTOM OF THE MICRO-TRENCH SHALL BE AT A MINIMUM DEPTH OF 16-INCHES BELOW THE EXISTING AC PAVEMENT SURFACE.
- ANCHORS/SPACERS SHALL BE PLACED AT A MAXIMUM OF 10-FEET APART ALONG THE ALIGNMENT TO ENSURE THE CONDUIT DOES NOT RISE FROM THE BOTTOM OF THE MICRO-TRENCH AND DOES NOT TOUCH THE WALLS OF THE MICRO-TRENCH DURING INSTALLATION.

BACKFILL

- ALL MICRO-TRENCHES SHALL BE COMPLETELY BACKFILLED WITH A CEMENT SAND SLURRY 2500 PSI TO FINISH GRADE BY THE END OF THE WORK DAY.

GRIND AND RESURFACE SECTION

- COMMENCEMENT OF SURFACE PREPARATION SUCH AS GRINDING/CHIPPING FOR ASPHALT CONCRETE PAVING REPLACEMENT WILL OCCUR NO SOONER THAN 48 HOURS AFTER SLURRY BACKFILL OF TRENCH. FIELD CONDITIONS OR MATERIAL USED MAY NECESSITATE A LONGER WAIT AS DETERMINED BY THE INSPECTOR.
- AS SOON AS BACKFILL HAS CURED, NOT TO EXCEED 30 CALENDAR DAYS, ASPHALT CONCRETE SHALL BE GROUND AND CAPPED AS FOLLOWS:
 - EXISTING AC AND SLURRY BACKFILL SHALL BE GROUND DOWN 4-INCHES, FOR A WIDTH OF 18-INCHES BUT NO LESS THAN 6-INCHES FROM BOTH EDGES OF THE MICRO-TRENCH AND RESURFACED WITH CLASS C2 ASPHALT AND BINDER GRADE PER BROWNBOOK TABLE 302-5.1 (A).
 - TACK COAT ALL EDGES WITH EITHER SS-1H EMULSIFIED ASPHALT OR PG 64-10 PAVING ASPHALT IMMEDIATELY BEFORE THE ADJOINING ASPHALT CONCRETE IS PLACED.
- WHERE ANGULAR CROSSING OR ANY LENGTH-WISE CUTS OF A BIKE LANE OCCUR BY MICROTRENCHING, THE CAPPING LIMITS SHALL EXTEND THE FULL WIDTH OF THE BIKE LANE. PERPENDICULAR CROSSINGS MAY RECEIVE TYPICAL CAPPING WIDTH PER NOTE 16.A. ABOVE. PAVEMENT MARKINGS SHALL BE RESTORED IN KIND. WHERE NO BIKE LANE MARKINGS EXIST, CONTRACTOR SHALL CONSULT WITH BOE AND LADOT TO DETERMINE LOCATION OF ANY PLANNED BIKE LANES SO THAT IMPACT OF PAVEMENT SURFACE MAY BE AVOIDED.



STANDARD PLAN NO. **S-474-0** VAULT INDEX NUMBER B-4788 SHEET 2 OF 3 SHEETS

NOTES: (CONTINUED)

- PAVEMENT SHALL BE LEVEL WITH ADJACENT ROADWAY ELEVATIONS AND SHALL PROVIDE A SMOOTH SURFACE PER GREENBOOK SECTION 302-5 AS AMENDED BY THE BROWNBOOK AND SUBJECT TO ACCEPTANCE BY THE INSPECTOR.

VAULTS AND SERVICE CONNECTIONS

- CONNECTION TO SERVICE LATERALS, JUNCTION BOXES, ETC., SHALL BE DONE SUCH THAT CURB AND GUTTER IS NOT DISTURBED, SETTLED OR DAMAGED. REMOVAL LIMITS OF SIDEWALK SHALL FOLLOW APPLICABLE STANDARDS AND REQUIREMENTS AS APPROVED BY THE ENGINEER.
- THE USE OF HYDRO-JETTING IS NOT PERMITTED. TRENCHLESS METHODS SHALL NOT CREATE A VOID TWO TIMES GREATER THAN CONDUIT. VOID SHALL BE COMPACTED AND BACKFILLED WITH APPROVED CONTROLLED LOW-STRENGTH MATERIAL (CLSM).

IDENTIFICATION

- EACH MICRO-TRENCH SHALL BE IDENTIFIED WITH A METAL IDENTIFICATION TAG LISTING THE OWNER, YEAR OF CONSTRUCTION, AND INCLUDE THE WORDS "NOT A SURVEY POINT". IF THE WORK IS MORE THAN 50 FEET IN LENGTH, PLACE THE TAG NEAR EACH END OF THE MICRO-TRENCH AND AT INTERVALS NOT TO EXCEED 50 FEET.

STANDARD PLAN NO. **S-474-0** VAULT INDEX NUMBER B-4788 SHEET 3 OF 3 SHEETS

PREPARED BY:

O-S-Pro
Telecom Solutions, LLC

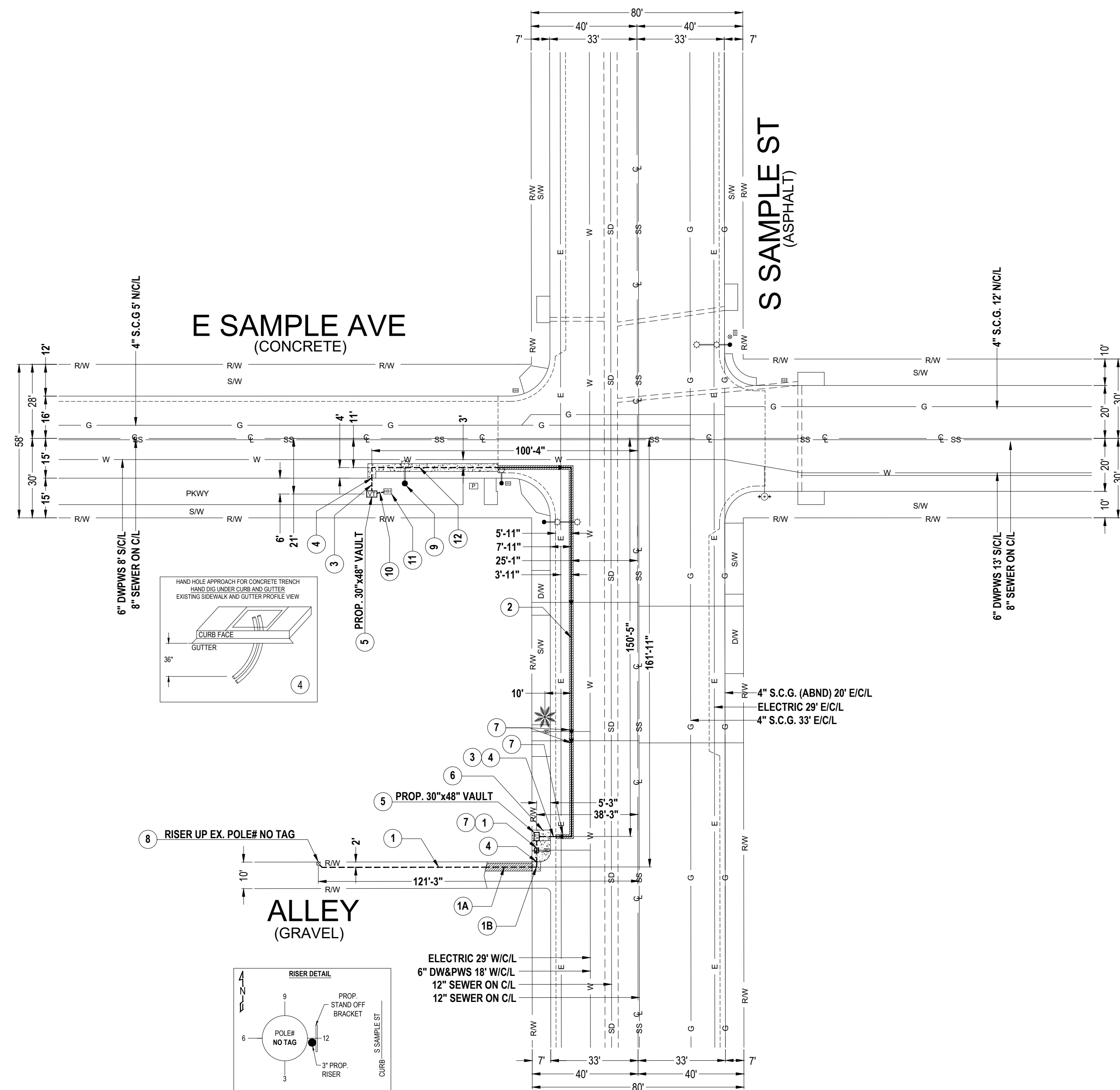
2001 THIRD ST #H, RIVERSIDE, CA 92507
(626) 320-0996 | peterm@ospros.net

CONSTRUCTION PLAN

CLIENT INFORMATION STREET ADDRESS CITY, STATE	DRAWN	OSPRO
	DESIGN	OSPRO
	CHECKED	OSPRO
PROJECT TITLE SITE LOCATION	DATE	XX/XX/2020
	2 OF 3	
PROJECT #	TRACKING #.	REV
XXXXXX	XXXXXXXXXXXXXXXXXX	0

CITY PERMIT INFORMATION	
A/C STREET SQUARE FOOTAGE	312'
DIRT ALLEY SQUARE FOOTAGE	63'
CONCRETE STREET SQUARE FOOTAGE	166'
CONCRETE PARKWAY SQUARE FOOTAGE	80
DIRT / GRASS PARKWAY SQUARE FOOTAGE	9'
TOTAL LINEAR FOOTAGE	333'
TOTAL SQUARE FEET	630'

CONSTRUCTIONS NOTES:	TOTALS
1. OPEN TRENCH TO PLACE (1)-3" PVC (SCH-40) CONDUIT FOR FIBER OPTIC CABLE INSTALLATION. (SEE DETAIL SHEET 1)	71 L.F.
1A. CONCRETE TRENCH TO PLACE (1)-3" PVC (SCH-40) CONDUIT FOR FIBER OPTIC CABLE INSTALLATION. (SEE DETAIL SHEET 1)	4 L.F.
1B. ASPHALT TRENCH TO PLACE (1)-3" PVC (SCH-40) CONDUIT FOR FIBER OPTIC CABLE INSTALLATION. (SEE NOTE BELOW)	17 L.F.
2. MICRO TRENCH TO PLACE • 2 x 1.25" CONDUITS	173 L.F.
3. OPEN TRENCH / HAND DIG TO PLACE • 2 x 1.25" CONDUITS	10 L.F.
4. HAND DIG UNDER CURB & GUTTER PER HAND HOLE APPROACH. (SEE DETAIL SHEET 1)	3 L.F.
5. PLACE 30"x48" VAULT (HAND DIG ONLY) (MODEL#A6001430TAPCX18)	2 EA.
6. REMOVE & REPLACE FULL FLAG OF CONCRETE IN PARKWAY (FROM SCORE LINE TO SCORE LINE)	80 SQFT.
7. EXPOSE TO LOCATE UTILITIES / POTHOLE	8 EA.
8. RISER UP EXISTING POLE PER RISER DETAIL HEREON (CONTRACTOR TO CONFIRM RISER LOCATION & SIZE WITH MAKE-READY PRIOR TO INSTALLATION).	
9. NEW STREET LIGHT / NODE LOCATION (TO BE PERMITTED AND CONSTRUCTED BY OTHERS)	
10. OPEN TRENCH / HAND DIG TO PLACE 2" CONDUIT	3 L.F.
11. NEW 2"x3" HAND HOLE (TO BE PERMITTED AND CONSTRUCTED BY OTHERS)	
12. CONCRETE STREET CUT TO PLACE • 2 x 1.25" CONDUITS	52 L.F.



- ASPHALT TRENCH NOTES:**
- ASPHALT TRENCH SHALL BE 12" IN WIDTH AND HAVE A DEPTH OF 36" MIN.
 - TRENCH BACKFILL AND A/C PAVEMENT RESURFACING SHALL FOLLOW THE LATEST VERSION OF LA CITY STD. PLAN S-477-2

NOTE:
CONTRACTOR TO POT HOLE FOR EXIST. DEPTH OR UTILITIES CONDUIT PRIOR TO START OF CONSTRUCTION.

NOTE:
CONTRACTOR TO REMOVE & REPLACE DAMAGED CONCRETE AND MATCH EXISTING LANDSCAPE TO SATISFACTION OF THE CITY RESIDENT ENGINEER

PREPARED BY:

O-S-Pro
Telecom Solutions, LLC

2001 THIRD ST #H, RIVERSIDE, CA 92507
(626) 320-0996 | peterm@ospros.net

CONSTRUCTION PLAN

CLIENT INFORMATION STREET ADDRESS CITY, STATE	DRAWN	OSPRO
	DESIGN	OSPRO
	CHECKED	OSPRO
PROJECT TITLE SITE LOCATION	DATE	XX/XX/2020
	3 OF 3	
PROJECT # XXXXXX	TRACKING #. XXXXXXXXXXXXXXXXXX	REV 0