CITY OF BELL GARDENS
PUBLIC WORKS DEPARTMENT

8327 GARFIELD AVENUE • BELL GARDENS, CALIFORNIA 90201-6122
(562) 806-7770 FAX (562) 806-7789 • WWW.BELLGARDENS.ORG

SOIL REMEDIATION PROJECT AT FORMER BERK OIL SITE

CIP NO. 3927

ADDENDUM NO. 1

May 22, 2024

This addendum is being issued for the **CONTRACT DOCUMENTS, PLANS, SPECIFICATIONS AND STANDARD DRAWINGS FOR THE SOIL REMEDIATION PROJECT AT THE FORMER BERL OIL SITE (the "Bid Documents")**.

Submit a bid with the full understanding and full consideration of this addendum.

The addendum is being issued to make the following changes to the Bid Documents:

1. Appendix "A" (Construction Plans) is replaced with the attached Appendix "A-R1" (Construction Plans).

2. Appendix "B" (Technical Specifications for Remediation) is replaced with the attached Appendix "B-R1" (Technical Specifications for Remediation).

Inform subcontractors and suppliers as necessary.

Sincerely,

Bernardo Iniguez
Director of Public Works/Facilities

Attachments:
Appendix A-R1 (Construction Plans)
Appendix B-R1 (Technical Specifications for Remediation)

The bidder shall individually identify and acknowledge receipt of this addendum by signing and enclosing a copy of this form in their bid submittal. Failure to do so may result in disqualification of their bid submittal.

_____ _____
Signature of Bidder Date

_____
Bidder Firm Name and Address

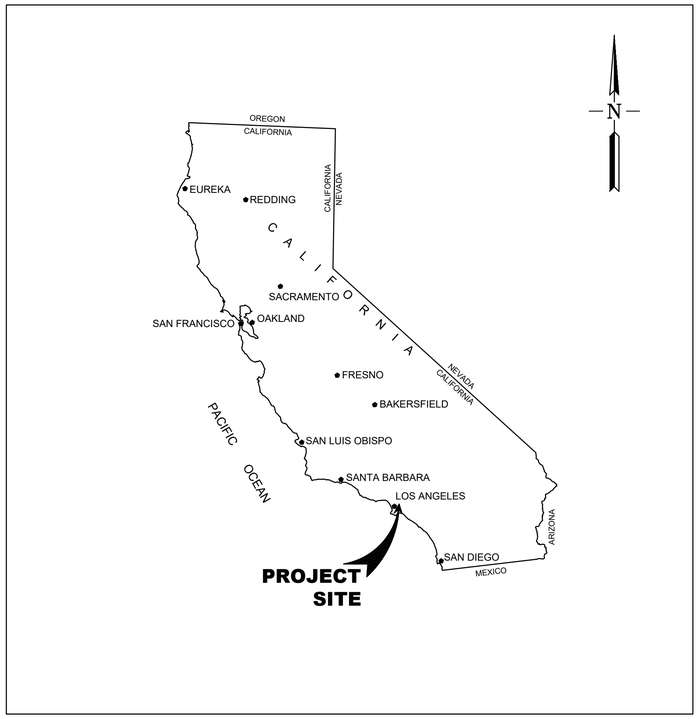
APPENDIX "A-R1"

CONSTRUCTION PLANS

LIST OF CONSTRUCTION PLANS

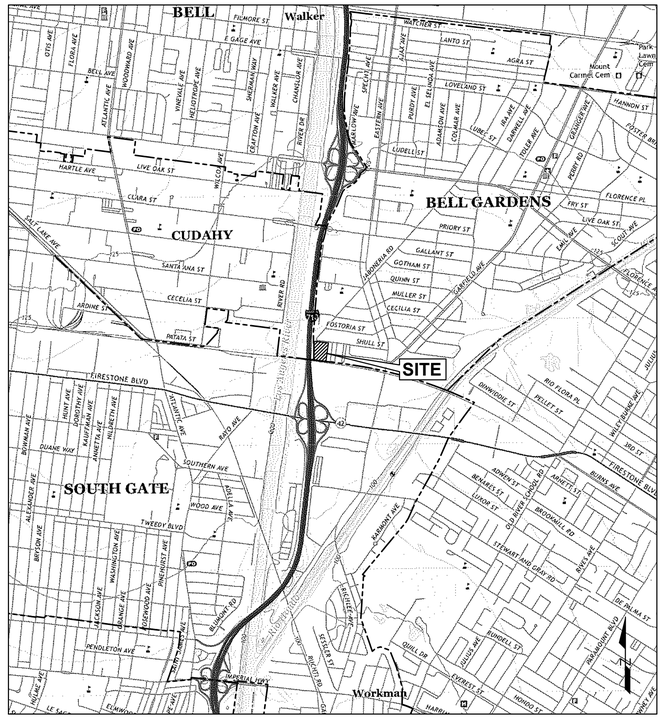
Plan No.	Description
G-1	Drawing List and Site Location Maps
G-2	General Notes
G-3.1	Topographic Survey, Sheet 1 of 4
G-3.2	Topographic Survey, Sheet 2 of 4
G-3.3	Topographic Survey, Sheet 3 of 4
G-3.4	Topographic Survey, Sheet 4 of 4
G-4	Existing Conditions Plan with Aerial Photograph
C-1	Site Grading and Restoration Plan
C-2	Overall Excavation Layout
C-3	Excavation Plan – Area 1 - Grids 1A, 1B, 1C, 1D
C-4	Excavation Plan – Area 2 – Grids 2A, 2B, 2C
C-5	Excavation Plan – Area 3 – Grids 2D, 2E, 2F
C-6	Excavation Plan – Area 3 – Grids 3A, 3B
C-7	Site Grading and Restoration Plan

SOIL REMEDIATION PROJECT
FORMER BERK OIL SITE
5614, 5622, AND 5636 SHULL STREET
CITY OF BELL GARDENS, CALIFORNIA

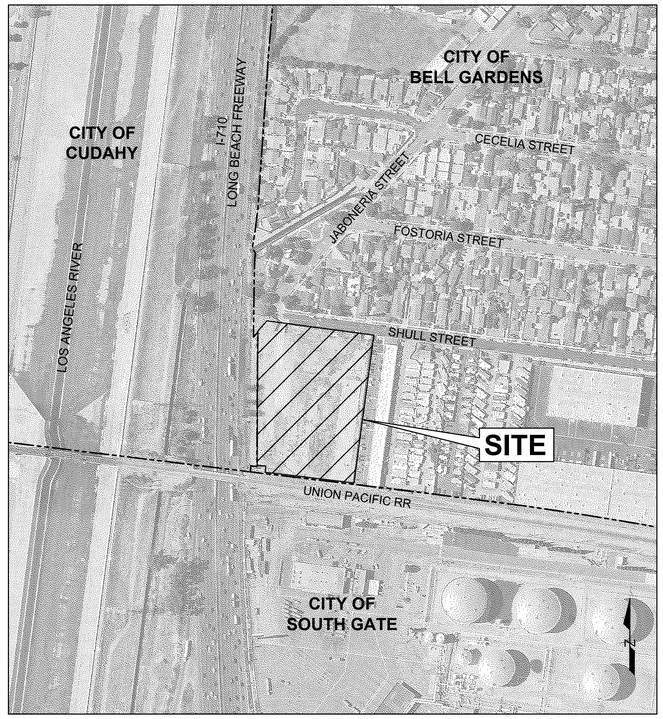


SITE LOCATION MAP

NOT TO SCALE



SITE LOCATION MAP



SITE MAP

SHEET NUMBER	DRAWING NUMBER	DRAWING NAME
1	G-1	DRAWING LIST AND SITE LOCATION MAPS
2	G-2	GENERAL NOTES
3	G-3.1	TOPOGRAPHIC SURVEY, SHEET 1 OF 4
4	G-3.2	TOPOGRAPHIC SURVEY, SHEET 2 OF 4
5	G-3.3	TOPOGRAPHIC SURVEY, SHEET 3 OF 4
6	G-3.4	TOPOGRAPHIC SURVEY, SHEET 4 OF 4
7	G-4	EXISTING CONDITIONS PLAN WITH AERIAL PHOTOGRAPH
8	C-1	SITE PREPARATION PLAN
9	C-2	OVERALL EXCAVATION LAYOUT
10	C-3	EXCAVATION PLAN – AREA 1 - GRIDS 1A, 1B, 1C, 1D
11	C-4	EXCAVATION PLAN – AREA 2 – GRIDS 2A, 2B, 2C
12	C-5	EXCAVATION PLAN – AREA 2 – GRIDS 2D, 2E, 2F
13	C-6	EXCAVATION PLAN – AREA 3 – GRIDS 3A, 3B
14	C-7	SITE RESTORATION AND GRADING PLAN

REGISTERED PROFESSIONAL ENGINEER
ANDI COX
66649
Exp 6/30/24
CIVIL
STATE OF CALIFORNIA

NO.	DATE	DSGN	DR	CHK	APVD
0	05/10/24	AC	KMC	CB	AHC

ISSUE FOR BID

REVISION	BY	APVD
	KMC	AHC

SOIL REMEDIATION PROJECT
FORMER BERK OIL SITE
5614, 5622, AND 5636 SHULL STREET
CITY OF BELL GARDENS, CALIFORNIA

DRAWING STATUS
ISSUED FOR BID

DRAWING LIST AND SITE LOCATION MAPS

WSP USA
Environment & Infrastructure, Inc.
3560 Hyland Ave, Suite 100
Costa Mesa, California, 94626
(949) 663-4100

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	05/10/2024
PROJ	CM20167712
DWG	G-1
SHEET	1 OF 14

FILE NAME: C:\Users\wds_kevin.cardenas2\WSP O365\WDS-Bay Area Graphics - Documents\berk\23_0926_sm\shts\G-01.dwg PLOT DATE: Fri, 10 May 2024 PLOT TIME: 2:57 PM

GENERAL NOTES

REMOVAL IMPLEMENTATION WILL BE BY THE FOLLOWING PARTIES:

REMOVAL ACTION OWNER - CITY OF BELL GARDENS (CITY)

LEAD AGENCY - LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD (RWQCB)

ENGINEER - WSP USA ENVIRONMENT AND INFRASTRUCTURE, INC. (WSP)

CONTRACTOR - PARTIES CONTRACTED BY THE CITY TO PERFORM THE WORK

1. ALL MATERIAL AND WORK SHALL CONFORM TO THE CITY'S MUNICIPAL CODE WHICH ADOPTS LOS ANGELES COUNTY AMENDMENTS TO THE 2022 CALIFORNIA BUILDING CODE (CBC).

2. THE TERM "PROVIDE" MEANS TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (STANDARD SPECIFICATIONS), AND IN ACCORDANCE WITH THESE DRAWINGS AND SPECIFICATIONS, ALL TO THE SATISFACTION OF THE ENGINEER. CONTRACTOR SHALL MAKE ENGINEER AWARE OF DISCREPANCIES BETWEEN PLANS AND/OR SPECIFICATIONS UPON DISCOVERY, IN WRITING.

3. ALL PERSONNEL INVOLVED SHALL FOLLOW THE REQUIREMENTS FOR EXCAVATION CONTAINED IN THE STATE CONSTRUCTION SAFETY ORDERS ENFORCED BY THE STATE DIVISION OF INDUSTRIAL SAFETY.

4. THE SPECIFICATIONS FOR THIS PROJECT, WHICH ARE A SEPARATE DOCUMENT, ARE AN INTEGRAL PART OF THE CONTRACT DOCUMENTS. SEE SPECIFICATIONS FOR INFORMATION NOT GIVEN IN THESE GENERAL NOTES OR SHOWN IN THESE PLANS. IF DISCREPANCIES BETWEEN THE PLANS AND SPECIFICATIONS OCCUR, ENGINEER SHALL BE NOTIFIED PRIOR TO PROCEEDING WORK.

5. HORIZONTAL COORDINATES ARE BASED UPON NORTH AMERICAN DATUM OF 1983 (NAD 83), CALIFORNIA STATE PLANE COORDINATE SYSTEM, ZONE 5 (CCS 83).

6. ELEVATIONS ARE BASED UPON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

7. CONTRACTOR SHALL PROVIDE WORK AREA PROTECTION MEASURES SUCH AS FENCING AND WARNING SIGNS.

8. CONTRACTOR SHALL VISUALLY INSPECT THE SITE TO ASCERTAIN THE CONDITION OF EXISTING FEATURES AND FAMILIARIZE WITH PROPOSED WORK.

9. CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL NECESSARY PERMITS EXCEPT FOR SPECIFIED PERMITS SECURED BY THE CITY AND THE ENGINEER.

10. CONTRACTOR SHALL KEEP PERMITS ON-SITE AND COMPLY WITH ALL PROVISIONS OF THE PERMITS AND PROVIDE A COPY TO THE ENGINEER PRIOR TO BEGINNING WORK.

11. ALL DATA, DRAWINGS, AND CORRESPONDENCE FROM LOWER-TIER MANUFACTURERS OR SUPPLIERS SHALL BE ROUTED THROUGH THE CONTRACTOR.

12. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMIT RELATED INSPECTIONS. THE CONTRACTOR SHALL VERIFY THE ISSUANCE OF AND PICK UP ALL CITY PERMITS PRIOR TO THE START OF WORK.

13. ALL WORK SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS AND ORDINANCES.

14. LIMITS OF WORK SHOWN ARE APPROXIMATE. CONTRACTOR SHALL COORDINATE LIMITS OF WORK WITH ENGINEER AND THE OWNER.

15. CONTRACTOR SHALL CONFIRM THE TEMPORARY STAGING AREA AND SCHEDULE OF WORK WITH ENGINEER. REVISION OF THE TEMPORARY STAGING AREA SHALL BE APPROVED IN ADVANCE BY ENGINEER.

16. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE PLANS AND COMPARE ALL PLANS FOR CONFORMANCE AS TO THE LAYOUT OF DIMENSIONS AND ELEVATIONS. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES FOR CORRECTIVE ACTION PRIOR TO PROCEEDING WITH WORK.

17. ENGINEER SHALL BE NOTIFIED OF ANY UNANTICIPATED CONDITIONS THAT ARE ENCOUNTERED AND WILL DETERMINE WHETHER DESIGN CHANGES WILL BE REQUIRED. THIS INCLUDES ANY UNANTICIPATED CONDITIONS THAT HAVE THE POTENTIAL TO IMPACT THE CONSTRUCTION SCHEDULE.

18. CONTRACTOR SHALL HAVE COPIES OF THE PLANS, SPECIFICATIONS, AND PERMITS FOR THIS PROJECT ON THE SITE AT ALL TIMES, AND THEY SHALL BE FAMILIAR WITH ALL APPLICABLE STANDARDS, SPECIFICATIONS AND ANY OTHER CONDITION(S) RELATED TO THE PERMITS.

19. CONTRACTOR IS TO MAINTAIN AND PROVIDE ENGINEER WITH AN AS-BUILT MARKUP SET OF DRAWINGS AT THE COMPLETION OF ALL WORK, FOR THE ENGINEER TO GENERATE THE RECORD AS-BUILT DRAWINGS.

20. CONTRACTOR SHALL CONFIRM CONSTRUCTION SCHEDULE WITH ENGINEER AT LEAST 72 HOURS PRIOR TO BEGINNING ANY WORK AT THE SITE.

21. CONTRACTOR SHALL SEQUENCE, COORDINATE, AND CONDUCT REMOVAL OPERATIONS SUCH AS TO MAINTAIN CONTINUOUS PUBLIC SAFETY, DRAINAGE, AND UTILITY SERVICES TO EXISTING FACILITIES REQUIRING THESE SERVICES. NOTIFY ENGINEER AT LEAST SEVEN (7) DAYS, WHEN FEASIBLE, UNLESS OTHERWISE APPROVED, IN ADVANCE OF INTERRUPTION OF ANY OF THESE SERVICES.

22. THE PROPOSED CONSTRUCTION SCHEDULE SHALL BE PRESENTED IN A TIMELINE FORMAT SHOWING ESTIMATED START DATE, DURATION, AND COMPLETION TIMES FOR CRITICAL PATH ITEMS. THE ENGINEER WILL COMPILE AND MAINTAIN AN OVERALL PROJECT SCHEDULE WITH INPUT FROM THE CONTRACTOR. THE CONTRACTOR SHALL COMMUNICATE ANY DEVIATION FROM THE ORIGINALLY PROPOSED SCHEDULE TO THE ENGINEER WITHIN 24 HOURS.

23. CONTRACTOR WILL BE RESPONSIBLE FOR DEVELOPING THE IMPLEMENTATION SCHEDULE AND PREPARING THE FOLLOWING SUPPLEMENTAL PLANS:

- SITE-SPECIFIC HEALTH AND SAFETY PLAN (HASP)
- SOIL MANAGEMENT PLAN (SMP)
- TRANSPORTATION PLAN (TP)
- AND ANY OTHER REQUIRED SUPPORTING DOCUMENT(S).

24. THE CONTRACTOR SHALL DESIGNATE A CERTIFIED LEAD SUPERVISOR (CLS) PURSUANT TO CALIFORNIA DEPARTMENT OF PUBLIC HEALTH (CDPH) REQUIREMENTS (SECTION 6.5).

25. NO WORK ACTIVITIES SHALL BE PERFORMED BETWEEN THE HOURS OF 4:30 PM AND 7 AM WITHOUT THE CONSENT OF THE ENGINEER.

SAFETY NOTES

1. CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE WITHIN LIMITS OF WORK AT ALL TIMES INCLUDING SAFETY OF PERSONS AND PROPERTY, AND FOR ALL NECESSARY INDEPENDENT ENGINEERING REVIEWS OF THESE CONDITIONS. ENGINEER'S JOB SITE REVIEW DOES NOT INCLUDE REVIEW OF THE ADEQUACY OF CONTRACTOR'S SAFETY MEASURES.

2. THERE IS POTENTIAL FOR EXPOSURE TO HAZARDOUS MATERIALS IN SOIL DURING CONSTRUCTION. ALL WORK MUST BE PERFORMED IN COMPLIANCE WITH 29 CFR 1910.120(E) AND TITLE 8 CALIFORNIA CODE OF REGULATIONS (CCR) § 1532.1 AND APPENDICES.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING A SITE-SPECIFIC HEALTH AND SAFETY PLAN TO COVER THEIR ACTIVITIES ONSITE.

4. APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT SHALL BE WORN IN ACCORDANCE WITH THE PROJECT APPROVED HEALTH AND SAFETY PLAN.

5. ALL PERSONNEL WORKING ON SITE SHALL BE REQUIRED TO ATTEND A SITE-SPECIFIC SAFETY INTRODUCTION BEFORE STARTING ANY WORK AND AT THE BEGINNING OF EACH SUBSEQUENT WORK DAY.

6. THE WORK ZONE AND EXCAVATIONS WILL BE MONITORED IN ACCORDANCE WITH THE HASP AND APPLICABLE WORK PLANS PREPARED BY THE CONTRACTOR.

7. THE CLS SHALL BE RESPONSIBLE FOR UNDERSTANDING METHODS AND STANDARDS OF TESTING AND SAMPLING FOR LEAD IN SOIL, FOLLOWING GUILDELINES SET BY THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH (CDPH) REQUIREMENTS AND EPA REGULATORY STANDARDS (TITLE 17 CCR § 35033, § 35035, AND § 35036).

8. THE CERTIFIED LEAD SUPERVISOR (CLS) SHALL BE RESPONSIBLE FOR SELECTING APPROPRIATE RESPIRATORY PROTECTION BASED ON AIR MONITORING RESULTS ACCORDING TO UNITED STATES DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (HUD) GUIDELINES: CHAPTER 9 AND TITLE 8 CCR § 1532.1.

UTILITY NOTES

1. IT IS CONTRACTOR'S RESPONSIBILITY TO LOCATE, PROTECT, AND MAINTAIN EXISTING UTILITIES NOT EXPLICITLY CALLED OUT FOR DEMOLITION IN THE PLANS, WHETHER OR NOT SHOWN ON THE PLANS. CONTRACTOR SHALL CONTACT THE UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA (1-800-422-4133) AT LEAST TWO DAYS PRIOR TO ANY WORK. CONTRACTOR SHALL RETAIN A PRIVATE UTILITY-LOCATING CONTRACTOR TO LOCATE UTILITIES WITHIN THE WORK AREA WITH TRAINING PURSUANT TO CALIFORNIA GOVERNMENT CODE 4216 THROUGH 4216.9, WHICH MEETS THE MINIMUM TRAINING GUIDELINES OF COMMON GROUND ALLOWANCE (CGA) CURRENT BEST PRACTICES.

2. PRIOR TO EXCAVATION, THE CONTRACTOR SHALL HAVE A STATE OF CALIFORNIA LICENSED SURVEYOR LAY OUT AND STAKE THE PROPERTY LINE. IN ADDITION, THE CONTRACTOR SHALL MAINTAIN THE PROPERTY LINE DELINEATION THROUGHOUT THE DURATION OF THE PROJECT TO COMPLETE EXCAVATIONS UP TO PROPERTY LINE AS SHOWN IN DRAWINGS AND TO RESTORE FENCE WITHIN THE CITY'S PROPERTY.

3. ALL EXISTING AND ABANDONED UTILITIES MAY NOT BE SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL VERIFY ALL LOCATIONS AND ELEVATIONS AND SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT UTILITY LINES WHETHER SHOWN OR NOT SHOWN.

4. CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES NOT EXPLICITLY CALLED OUT FOR DEMOLITION AND TAKE ALL STEPS NECESSARY TO AVOID CONTACT WITH SUCH WHICH MAY RESULT IN INJURY TO PERSONNEL OR DAMAGE TO FACILITIES. THE FINAL DETERMINATION OF EXACT LOCATIONS AND THE COST OF REPAIR TO DAMAGED FACILITIES IS THE RESPONSIBILITY OF CONTRACTOR. THE CONTRACTOR SHALL POTHOLE TO DAYLIGHT EXISTING UTILITIES PRIOR TO CONSTRUCTION AS NEEDED.

5. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES NOT EXPLICITLY CALLED OUT FOR DEMOLITION.

6. NO CONNECTION SHALL BE MADE TO ANY WATER MAIN, STORM DRAIN, ELECTRICAL SOURCE OR ANY OTHER UTILITY SYSTEM WITHOUT PRIOR APPROVAL FROM THE UTILITY AGENCY, THE ENGINEER, AND THE SITE FACILITIES ENGINEER/MANAGER OR THEIR DESIGNEE.

7. PRIOR TO ANY EXCAVATION IN THE VICINITY OF ANY EXISTING UNDERGROUND FACILITIES, INCLUDING ALL WATER, SEWER, STORM DRAIN, GAS, OR OTHER PIPELINES; ALL BURIED ELECTRICAL POWER, COMMUNICATIONS, OR TELEVISION CABLES; ALL TRAFFIC SIGNAL AND STREET LIGHTING FACILITIES; ALL ROADWAY, STATE HIGHWAY, AND RAILROAD RIGHTS-OF-WAY; THE CONTRACTOR SHALL NOTIFY THE RESPECTIVE AUTHORITIES REPRESENTING THE OWNERS OR AGENCIES RESPONSIBLE FOR SUCH FACILITIES NOT LESS THAN 3 DAYS OR MORE THAN 7 DAYS PRIOR TO EXCAVATION SO THAT A REPRESENTATIVE OF SAID OWNERS OR AGENCIES CAN BE PRESENT DURING SUCH WORK IF THEY SO DESIRE.

8. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING AND MAINTAINING SAFE CLEARANCES FROM OVERHEAD ELECTRICAL LINES BASED ON LINE VOLTAGE AT ALL TIMES AND, WHERE HAZARDOUS CONDITIONS EXIST, FOR TAKING THE NECESSARY PRECAUTIONS AGAINST INJURY AND DAMAGE.

STORMWATER, EROSION AND SEDIMENTATION NOTES

1. STORMWATER POLLUTION CONTROLS SHALL BE IMPLEMENTED TO MINIMIZE RUNOFF OF SEDIMENT FROM DELINEATED EXCAVATION AREAS IN STORM WATER. CONTRACTOR SHALL COMPLY WITH ANY REQUIREMENTS FROM THE CITY AND THE STORMWATER POLLUTION PREVENT PLAN (SWPPP) PREPARED BY ENGINEER, AND ANY ADDITIONAL REQUIREMENTS INCLUDED IN THE STATE WATER RESOURCES BOARD ORDER 2009-0009-DWQ (CONSTRUCTION GENERAL PERMIT) AND ITS AMENDMENTS, IF SUCH PERMIT IS REQUIRED AND OBTAINED BY THE ENGINEER.

2. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ON THIS PLAN SHALL BE INSTALLED FOR ALL EXCAVATION AND GRADING ACTIVITIES TO PREVENT SEDIMENT DISCHARGES IN ACCORDANCE WITH THE "CALTRANS STATEWIDE STORMWATER MANAGEMENT PLAN." THERE ARE NO KNOWN STORM DRAIN INLETS ON SITE. THE CONTRACTOR SHALL BE FAMILIAR WITH ALL NEARBY STORM DRAIN INLETS AND PREVENT DISCHARGES TO THESE INLETS.

3. CONTRACTOR SHALL OBSERVE AND ENFORCE SUFFICIENT FUGITIVE DUST SUPPRESSION AND MITIGATION MEASURES RELATED TO POTENTIAL LEAD EMISSIONS IN ACCORDANCE WITH THE DUST CONTROL AND MONITORING PLAN (DCMP).

4. ALL EROSION CONTROL DEVICES AND BMPS SHALL BE MAINTAINED AND PERIODICALLY INSPECTED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION. ANY DAMAGE INCURRED BY EROSION SHALL BE RECTIFIED IMMEDIATELY.

5. PAVED STREETS, SIDEWALKS, AND OTHER IMPROVEMENTS SHALL BE MAINTAINED IN A NEAT AND CLEAN CONDITION, FREE OF LOOSE SOIL, CONSTRUCTION DEBRIS, AND TRASH. STREET SWEEPING, VACUUM CLEANING OR OTHER EQUALLY EFFECTIVE MEANS SHALL BE USED DAILY OR AS NEEDED TO CONTROL EROSION AND REMOVE DIRT, DUST, MUD AND CONSTRUCTION DEBRIS THAT MAY BE TRACKED INTO THE STREET AT THE END OF EACH DAY.

6. VEHICLES ENTERING AND DEPARTING FROM THE PROJECT SITE MUST USE THE STABILIZED CONSTRUCTION ENTRANCE AND SHALL NOT TRACK OR DROP EARTH MATERIALS ONTO PAVED SURFACES OR PUBLIC STREETS OFF-SITE.

7. FUEL THAT MAY BE KEPT ONSITE DURING CONSTRUCTION WILL BE STORED IN SUCH A MANNER THAT PREVENTS ACCIDENTAL SPILLS FROM IMPACTING STORM WATER. ANY STORM DRAIN INLETS WHERE FUEL MAY MOBILIZE SHALL BE PROTECTED USING HYDROCARBON SOCKS SECURED USING SANDBAGS.

8. STOCKPILE LOCATIONS SHALL BE COORDINATED WITH THE ENGINEER PRIOR TO CONSTRUCTION. WHEN EARTHWORK ACTIVITIES OCCUR, DUST CONTROL MEASURES SHALL BE IMPLEMENTED TO MINIMIZE DUST GENERATION. EXCAVATED SOIL SHALL BE HANDLED IN A MANNER CONSISTENT WITH THE REQUIREMENTS OF SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT (SCAQMD). AT A MINIMUM CONTRACTOR SHALL APPLY CHEMICAL STABILIZERS TO, APPLY DUST SUPPRESSANT TO, OR COVER STOCKPILED SOIL. STOCKPILED MATERIAL CLASSIFIED AS HAZARDOUS SHALL BE SEGREGATED FROM NON-HAZARDOUS MATERIAL. ALL STOCKPILES WILL BE LABELLED WITH "SOUTH COAST AQMD RULE 1466 - CONTROL OF PARTICULATE EMISSIONS FROM SOILS WITH TOXIC AIR CONTAMINANT(S) APPLICABLE SOIL." DURING PERIODS OF ACTIVE USE, INHALABLE PARTICULATE MATTER (PM10) MONITORS SHALL BE INSTALLED AND AMBIENT MONITORING SHALL BE CONDUCTED. THE SOIL STOCKPILE WILL BE KEPT VISIBLY MOIST TO MINIMIZE DUST EMISSIONS. DURING REMOVAL OF IMPACTED SOIL, THE EXCAVATION BOTTOM AND SIDEWALLS WILL BE MOISTENED TO SUPPRESS DUST EMISSIONS. IF NECESSARY, BASED ON PM10 READINGS, THE EXCAVATION SHALL BE SECURELY COVERED AT THE END OF EACH WORKDAY.

DEMOLITION NOTES

1. PAVEMENT AND CONCRETE PAD SHALL BE REMOVED FROM EXCAVATION AREAS DELINEATED. PAVEMENT SHALL BE SAWCUT AT LIMITS OF REMOVAL PRIOR TO RESTORATION.

2. SHOULD UNCHARTED, OR INCORRECTLY CHARTED, PIPING OR OTHER UTILITIES BE ENCOUNTERED DURING PERFORMANCE OF WORK, CONTRACTOR SHALL CONSULT THE UTILITY OWNER AND ENGINEER IMMEDIATELY FOR DIRECTION. CONTRACTOR SHALL REPAIR DAMAGED UTILITIES TO SATISFACTION OF THE UTILITY OWNER AND THE CITY.

3. CONTRACTOR SHALL MANAGE ALL DEMOLITION WASTES IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS AND REQUIREMENTS AND TRANSPORTATION PLAN. CONTRACTOR SHALL RECYCLE AT MINIMUM SIXTY FIVE PERCENT OF ALL CONSTRUCTION AND DEMOLITION DEBRIS TO MEET REQUIREMENT OF THE CITY.

4. THE EXTENT OF DEMOLITION REQUIRED BY THE CONTRACTOR WILL BE REVIEWED AND MODIFIED AS NECESSARY PRIOR TO THE "ISSUED FOR CONSTRUCTION" DRAWINGS.

5. ALL WASTE TRANSPORTATION SHALL BE COORDINATED BY THE CONTRACTOR PER THE TP.

EXCAVATION NOTES

1. THE EXCAVATION DESIGN IS BASED ON THE REMOVAL ACTION WORK PLAN (RAW). EXCAVATION SHALL BE PERFORMED IN COMPLIANCE WITH THE LINES AND GRADES SHOWN ON THE DRAWINGS. ALL DISTURBED, LOOSE, DESICCATED, SLAKED, OVERLY WET SOIL, DEBRIS, ORGANIC MATERIAL, AND ANY OTHER UNDESIRABLE SOIL SHALL BE REMOVED. ADDITIONAL REMOVAL MAY BE REQUIRED IF LOOSE OR SOFT MATERIAL OR UNDOCUMENTED FILL IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATION.

2. EXCAVATIONS SHALL BE SLOPED BACK AT A MAXIMUM INCLINATION OF 2 HORIZONTAL: 1 VERTICAL IN ACCORDANCE WITH SECTION J106 OF THE CBC. EXCAVATIONS THAT MEET CERTAIN REQUIREMENTS IN THE CBC AS DETERMINED BY THE COMPETENT PERSON MAY BE SLOPED BACK AT A MAXIMUM INCLINATION OF 1.5 HORIZONTAL: 1 VERTICAL ALL EXCAVATIONS, TEMPORARY CUT SLOPES, AND TEMPORARY SHORING SHALL ALSO COMPLY WITH CALIFORNIA OSHA STANDARDS FOR TRENCHING AND SHORING.

3. EXCAVATION SIDEWALL CONFIRMATION SAMPLES WILL BE COLLECTED USING AN APPROXIMATE 30-FOOT SPACING SYSTEM FOR PERIMETER EXCAVATIONS THAT EXTEND DEEPER THAN 3 FEET BELOW GROUND SURFACE (A CLOSER-SPACED SAMPLING GRID WILL BE USED IN SMALLER EXCAVATION AREAS).

4. CONFIRMATION SAMPLES WILL BE COLLECTED FOLLOWING THE PROCEDURES DESCRIBED IN THE RAW.

5. EXCAVATION BOTTOM AND SIDEWALL CONFIRMATION SOIL SAMPLES WILL BE SUBMITTED FOR LABORATORY ANALYSIS.

6. IF A CONFIRMATION SAMPLE ANALYTICAL RESULT INDICATES THAT BENZO(A)PYRENE (BAP) AND/OR LEAD ARE PRESENT AT CONCENTRATIONS EXCEEDING REMOVAL GOALS, AN ADDITIONAL 1 TO 2 FEET OF SOIL WILL BE EXCAVATED FROM THE AREA OF THE SAMPLING (GRID LOCATION) AND ADDITIONAL CONFIRMATION SAMPLING OF THE OVER-EXCAVATED AREA WILL BE PERFORMED.

BACKFILL NOTES

1. AREAS TO RECEIVE FILL SHALL BE CLEARED AND STRIPPED OF ALL DEBRIS, DELETERIOUS MATERIAL, ORGANIC MATERIAL AND/OR VEGETATION, AND REMNANTS RESULTING FROM DEMOLITION.

2. NO EXCAVATED SOIL SHALL BE REUSED FOR BACKFILL.

3. IMPORT FILL SHALL BE NON-EXPANSIVE SOIL WITH A PLASTICITY INDEX NO GREATER THAN 15 PERCENT, NOT GREATER THAN 20 PERCENT OF PARTICLES BY WEIGHT PASSING THE NUMBER 200 SIEVE, WITH AN ORGANIC CONTENT OF LESS THAN 3 PERCENT AND OF A SUITABLE GRADATION TO PROVIDE A FIRM UNYIELDING SURFACE WHEN APPROPRIATELY COMPACTED. THE MATERIAL SHALL CONTAIN NO PARTICLES GREATER THAN 1-INCH DIAMETER. NO RECYCLED MATERIAL SHALL BE UTILIZED AS IMPORT FILL.

4. IMPORTED FILL SHALL MEET THE DEPARTMENT OF TOXIC SUBSTANCES CONTROL'S CLEAN FILL ADVISORY GUIDELINES.

5. ALL FILL SHALL BE PLACED IN LOOSE LIFTS NOT TO EXCEED 12 INCHES LOOSE DEPTH.

6. PRIOR TO PLACEMENT OF BACKFILL, A REPRESENTATIVE OF THE ENGINEER WILL INSPECT AND APPROVE THE EXCAVATION BOTTOMS. NOTIFY THE ENGINEER 24 HOURS PRIOR TO THE DATE OF FILL PLACEMENT.

7. CONTRACTOR SHALL MAKE AVAILABLE TO ENGINEER THE SOURCE(S) OF ALL IMPORT FILL MATERIALS A MINIMUM OF 30 DAYS PRIOR TO BRINGING ANY MATERIALS ONSITE.

8. TRENCHING AND BACKFILL MATERIAL WHICH DOES NOT MEET THE SPECIFICATIONS SHALL BE REMOVED AND REPLACED AT NO ADDITIONAL EXPENSE TO THE OWNER.

COMPACTION NOTES

1. EACH LAYER OF EARTH FILL SHALL BE COMPACTED BY APPROVED TAMPING METHODS INCLUDING SHEEPS-FOOT ROLLERS, PNEUMATIC-TIRED ROLLERS, OR ANY OTHER MECHANICAL MEANS AS LONG AS THE SPECIFIED RELATIVE COMPACTION IS ACHIEVED. AT LOCATIONS WHERE IT WOULD BE IMPRACTICAL BECAUSE OF INACCESSIBILITY, FILL LAYERS SHALL BE COMPACTED BY HAND-DIRECTED COMPACTION EQUIPMENT.

2. ALL FILL SHALL BE COMPACTED TO 90 PERCENT OF MAXIMUM DRY DENSITY IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM D1557.

3. THE MOISTURE CONTENT OF THE FILL MATERIAL SHALL BE BROUGHT WITHIN 2 PERCENT OF THE LABORATORY OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D1557.

GRADE FINISHING NOTES

1. SURFACE FINISHING: SOIL STABILIZER SHALL BE APPLIED TO COMPACTED SOIL AT THE FINISHED GRADES.

2. SURFACE GRADES: SURFACE GRADES SHOWN ARE TO BE FINISHED GRADES.

3. ADJUST ALL RIMS TO FINISHED GRADING ELEVATIONS.

REGISTERED PROFESSIONAL ENGINEER
ANDI COX
86649
Exp 6/30/24
CIVIL
STATE OF CALIFORNIA

NO.	DATE	DSGN	DR	CHK	APVD
0	05/10/24	AC	KMC	CB	AHC

ISSUE FOR BID / REVISION

	BY	APVD
KMC	AHC	

SOIL REMEDIATION PROJECT
FORMER BERK OIL SITE
5614, 5622, AND 5636 SHULL STREET
CITY OF BELL GARDENS, CALIFORNIA

DRAWING STATUS
ISSUED FOR BID

GENERAL NOTES

WSP USA
Environment & Infrastructure, Inc.
3560 Hyland Ave, Suite 100
Costa Mesa, California, 94626
(949) 663-4100

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

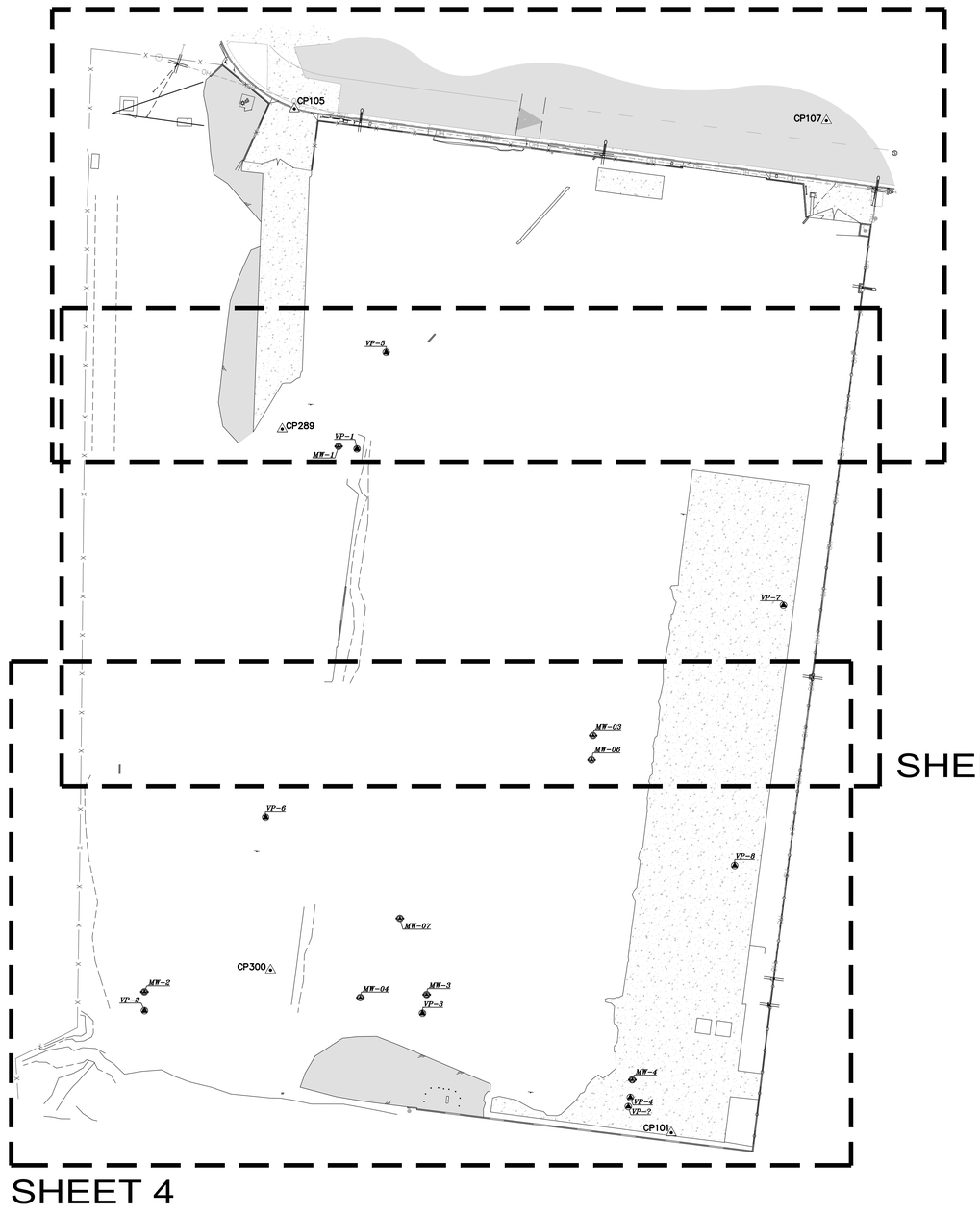
DATE	05/10/2024
PROJ	CM20167712
DWG	G-2
SHEET	2 OF 14

TOPOGRAPHIC SURVEY

5622 SHULL ST, BELL GARDENS, CA 90201

CONTROL POINTS				
CP#	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP101	1805693.11'	6510324.81'	110.69'	SET MAGNETIC NAIL
CP105	1806213.70'	6510133.12'	107.34'	SET MAGNETIC NAIL
CP107	1806207.65'	6510403.67'	108.13'	SET MAGNETIC NAIL
CP289	1806050.86'	6510126.94'	109.95'	SET PEN X
CP300	1805775.85'	6510120.98'	111.26'	SET 60D

SHEET 2



SHEET 3

SHEET 4

LEGEND

- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- CONTROL POINT
- ELECTRIC METER
- FIRE HYDRANT
- GATE
- GUARD POST
- GUY WIRE
- LIGHT STANDARD
- MONITORING WELL
- PALM TREE
- POWER POLE
- POWER POLE W/TRANSFORMER
- POWER POLE W/LIGHT
- SEWER MANHOLE
- SIGN
- SOIL VAPOR PROBE
- STREET LIGHT
- TREE (TYPICAL)
- TREE STUMP
- UTILITY POLE
- WATER VALVE
- APN — ASSESSOR'S PARCEL NUMBER
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- FS — FINISH SURFACE
- FL — FLOW LINE
- NG — NATURAL GROUND
- TOE — TOE OF SLOPE
- TC — TOP OF CURB
- TOC — TOP OF CASING
- TOS — TOP OF SLOPE
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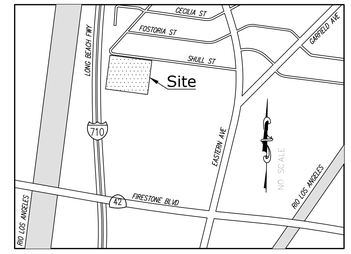
- TYP — TYPICAL
- WM — WATER METER
- BLOCK WALL
- CHAIN LINK FENCE
- EDGE OF PAVEMENT
- OH — OVERHEAD LINE
- WROUGHT IRON FENCE

VICINITY MAP



SURVEYED DECEMBER 13, 2023

MONITORING WELLS								
WELL	NORTHING (FEET)	EASTING (FEET)	LATITUDE (DD)	LONGITUDE (DD)	TOR (ELEVATION)	FS (ELEVATION)	TOC (ELEVATION)	RISER_HT
MW-1	1806042.05	6510155.61	33.9549803	-118.1699000	113.47	110.84	112.86	2.02
MW-2	1805764.72	6510256.85	33.9542178	-118.1702000	114.29	111.68	113.74	2.06
MW-3	1805763.32	6510200.41	33.9542146	-118.1697000	112.75	110.40	112.15	1.75
MW-4	1805720.02	6510305.01	33.9540961	-118.1694000	110.57	110.56	109.95	-0.61
MW-03	1805895.05	6510285.07	33.9543770	-118.1694000	109.53	110.24	108.83	-1.41
MW-04	1805761.81	6510166.67	33.9542103	-118.1698000	111.84	110.07	111.60	1.53
MW-06	1805882.71	6510284.26	33.9545431	-118.1694000	109.27	109.97	108.98	-0.99
MW-07	1805802.07	6510186.79	33.9543210	-118.1698000	111.50	109.88	111.32	1.44

RISER_HT = RISER HEIGHT
RISER HEIGHT DEFINITION: THE MEASURED DISTANCE FROM GROUND SURFACE TO TOP OF WELL CASING.
DD: DECIMAL DEGREES

SURVEYED DECEMBER 13, 2023

SOIL VAPOR PROBES					
LOCATION	NORTHING (FEET)	EASTING (FEET)	LATITUDE (DD)	LONGITUDE (DD)	FS (ELEVATION)
VP-1	1806040.75	6510164.98	33.9549768	-118.1698000	110.94
VP-2	1805755.18	6510056.91	33.9541916	-118.1702000	111.97
VP-3	1805753.82	6510198.28	33.9541885	-118.1697000	110.30
VP-4	1805711.07	6510304.00	33.9540715	-118.1694000	110.59
VP-5	1806089.89	6510179.85	33.9551119	-118.1698000	111.77
VP-6	1805853.61	6510118.51	33.9544623	-118.1700000	111.70
VP-7	1805961.29	6510381.89	33.9547595	-118.1691000	110.64
VP-8	1805828.97	6510357.07	33.9543958	-118.1692000	110.71
VP-9	1805706.40	6510302.95	33.9540587	-118.1694000	110.59

DD: DECIMAL DEGREES

GRAPHIC SCALE
30 0 15 30
FEET

PRESENTED AS PROJECT DWG 3.1

REVISIONS			
NO.	DATE	REVISIONS	BY
0	12/19/23	SUBMITTAL	VG-JS

UTILITY STATEMENT

BURIED UTILITIES AND/OR PIPELINES SHOWN HEREON ARE PER VISIBLE AND APPARENT SURFACE EVIDENCE, RECORD DRAWINGS OF THE CONSTRUCTED UTILITY LINES OBTAINED FROM RELIABLE AND RESPONSIBLE SOURCES NOT CONNECTED WITH CALVADA SURVEYING, INC. OR MARKINGS PROVIDED BY AN INDEPENDENT LOCATING CONTRACTOR. NO GUARANTEE OR WARRANTY, EITHER EXPRESSED OR IMPLIED, IS MADE AS TO THE ACCURACY OR THOROUGHNESS OF SUCH INFORMATION. IF MORE ACCURATE LOCATIONS OF UNDERGROUND UTILITIES OR PIPE LINES ARE REQUIRED, THE UTILITY OR PIPELINE WILL HAVE TO BE VERIFIED BY FIELD POTHOLING. CALVADA SURVEYING, INC. AND THE SURVEYOR OF RECORD SHALL NOT BE HELD LIABLE FOR THE LOCATION OF OR THE FAILURE TO NOTE THE LOCATION OF NON-VISIBLE UTILITIES OR PIPELINES.

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PREPARED FOR

WSP USA

2560 HYLAND AVE. SUITE 100
COSTA MESA, CA 92626

PHONE: (949) 574-7507

BASIS OF BEARINGS

THE BEARINGS SHOWN HEREON ARE BASED UPON THE CALIFORNIA COORDINATE SYSTEM OF 1983, CCS83, ZONE 5, (2023.25) IN ACCORDANCE TO THE CALIFORNIA PUBLIC RESOURCES CODE SECTIONS 8801-8819; SAID BEARINGS ARE DETERMINED LOCALLY UPON FIELD-OBSERVED TIES TO THE FOLLOWING LEICA SMARTNET NORTH AMERICA (S.N.N.A.) CONTINUOUSLY OPERATING REFERENCE STATIONS (C.O.R.S.):

S.N.N.A. CASF:
NORTHING = 1800797.59' EASTING = 6537292.57'

S.N.N.A. CASM:
NORTHING = 1829162.68' EASTING = 6418730.55'

BENCHMARK

ELEVATIONS SHOWN HEREON ARE BASED UPON LOS ANGELES COUNTY BENCHMARK PY12058, ELEVATION 111.39 FEET (NAVD 88).

DESCRIPTION:
L&SPW TAG IN E CB EASTERN AVE 1FT N/O ECR (NOSE) N'LY COR GARFIELD

SITE INFORMATION

SITE ADDRESS: 5622 SHULL ST, BELL GARDENS, CA 90201

ASSESSOR'S PARCEL NOS.:
6227-034-900
6227-034-901
6227-034-902
6227-034-903
6227-034-904
6227-034-905
6227-034-906
6227-034-907

SURVEYOR OF RECORD

FIELD COMPLETION DATE: DECEMBER 13, 2023

LICENSED LAND SURVEYOR — Armando D. DuPont — L.S. 7780 — Date Signed: 12/19/2023 — STATE OF CALIFORNIA

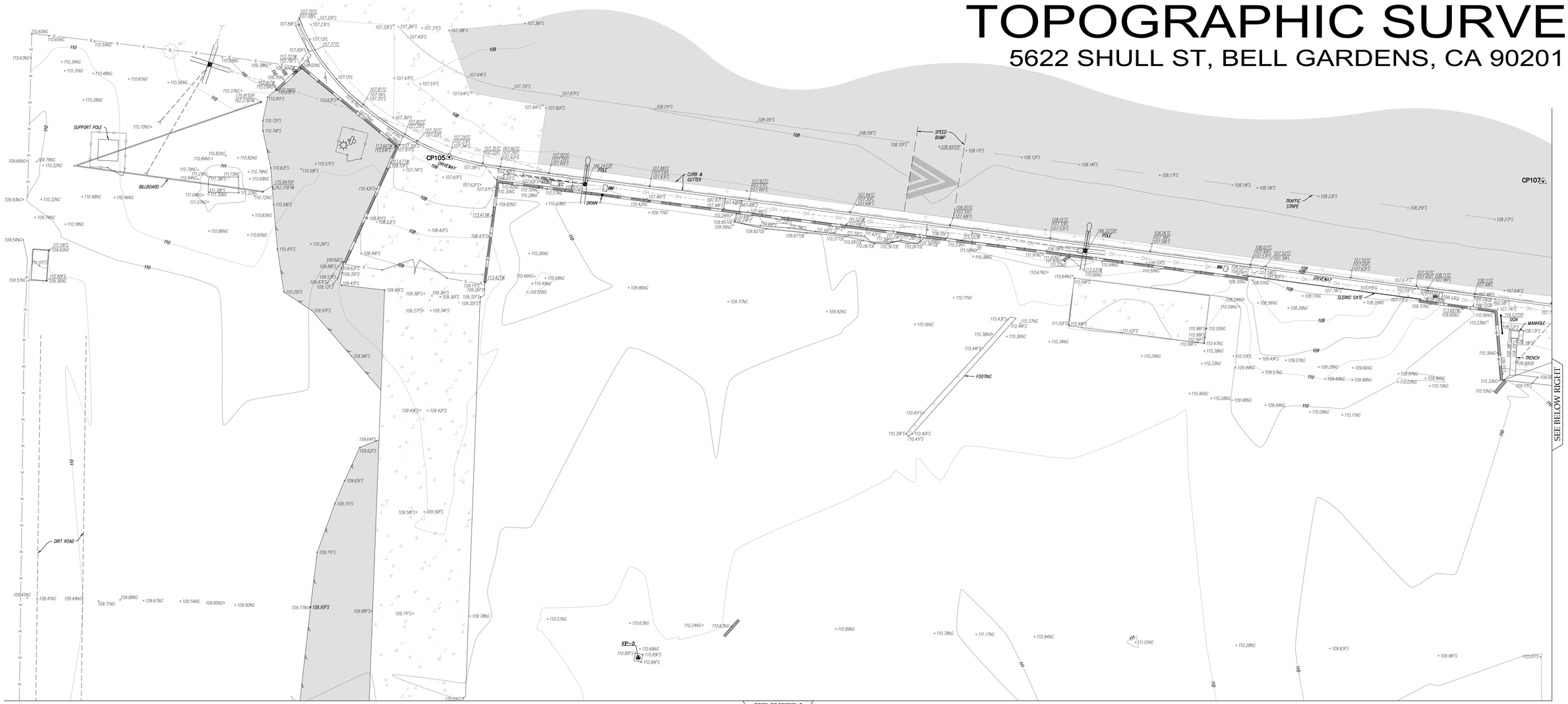
Armando D. DuPont
Registration No. 7780

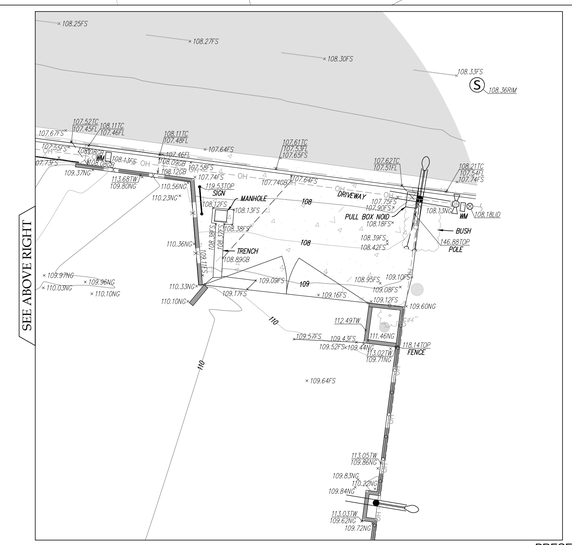
CALVADA SURVEYING, INC.
411 Jenks Circle, Suite 205, Corona, CA 92878
Phone: 951-280-9960 Fax: 951-280-9746
Toll Free: 800-CALVADA www.calvada.com

EST. 1989 JOB NO. 23916

TOPOGRAPHIC SURVEY

5622 SHULL ST, BELL GARDENS, CA 90201





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- CONCRETE PAVEMENT
- CONTROL POINT
- ELECTRIC METER
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- WROUGHT IRON FENCE

GRAPHIC SCALE

10 0 5 10

FEET

SURVEYED DECEMBER 13, 2023

SOIL VAPOR PROBES

LOCATION	NORTHING (FEET)	EASTING (FEET)	LATITUDE (DD)	LONGITUDE (DD)	FS (ELEVATION)
VP-1	1806040.75	6510164.98	33.9549768	-118.1698000	110.94
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VP-?	1805706.40	6510302.95	33.9540587	-118.1694000	110.59

DD: DECIMAL DEGREES

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PRESENTED AS PROJECT DWG 3.2

REVISIONS			
NO.	DATE	REVISIONS	BY
0	12/19/23	SUBMITTAL	VG-JS

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FIELD COMPLETION DATE: DECEMBER 13, 2023

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EST. 1989 JOB NO. 23916

TOPOGRAPHIC SURVEY

5622 SHULL ST, BELL GARDENS, CA 90201

SEE SHEET 2

SEE SHEET 4

LEGEND

- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- CONTROL POINT
- ELECTRIC METER
- FIRE HYDRANT
- GATE
- GUARD POST
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SURVEYED DECEMBER 13, 2023

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DD: DECIMAL DEGREES

SURVEYED DECEMBER 13, 2023

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WELL	NORTHING (FEET)	EASTING (FEET)	LATITUDE (DD)	LONGITUDE (DD)	TOR (ELEVATION)	FS (ELEVATION)	TOC (ELEVATION)	RISER_HT
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RISER_HT = RISER HEIGHT
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NO.	DATE	REVISIONS	BY
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PRESENTED AS PROJECT DWG 3.3

FIELD COMPLETION DATE: DECEMBER 13, 2023

SURVEYOR OF RECORD

LICENSED LAND SURVEYOR — Armando D. DuPont — L.S. 7780 — Date Signed: 12/19/2023 — STATE OF CALIFORNIA

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5622 SHULL ST, BELL GARDENS, CA 90201

SURVEYED DECEMBER 13, 2023

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MW-4	1805720.02	6510305.01	33.9540961	-118.1694000	110.57	110.56	109.95	-0.61
MW-03	1805895.05	6510285.07	33.9545770	-118.1694000	109.53	110.24	108.83	-1.41
MW-04	1805761.81	6510166.67	33.9542103	-118.1698000	111.84	110.07	111.60	1.53
MW-05	1805882.71	6510284.26	33.9545431	-118.1694000	109.27	109.97	108.98	-0.99
MW-07	1805802.07	6510186.79	33.9543210	-118.1698000	111.50	109.88	111.32	1.44

RISER_HT = RISER HEIGHT
RISER HEIGHT DEFINITION: THE MEASURED DISTANCE FROM GROUND SURFACE TO TOP OF WELL CASING.
DD: DECIMAL DEGREES

CONTROL POINTS

CP#	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP101	1805693.11'	6510324.81'	110.69'	SET MAGNETIC NAIL
CP105	1806213.70'	6510133.12'	107.34'	SET MAGNETIC NAIL
CP107	1806207.65'	6510403.67'	108.13'	SET MAGNETIC NAIL
CP289	1806050.86'	6510126.94'	109.95'	SET PEN X
CP300	1805775.85'	6510120.98'	111.26'	SET 60D

PRESENTED AS PROJECT DWG 3.4

REVISIONS			
NO.	DATE	REVISIONS	BY
0	12/19/23	SUBMITTAL	VG-JS

UTILITY STATEMENT

BURIED UTILITIES AND/OR PIPELINES SHOWN HEREON ARE PER VISIBLE AND APPARENT SURFACE EVIDENCE; RECORD DRAWINGS OF THE CONSTRUCTED UTILITY LINES OBTAINED FROM RELIABLE AND RESPONSIBLE SOURCES NOT CONNECTED WITH CALVADA SURVEYING, INC. OR MARKINGS PROVIDED BY AN INDEPENDENT LOCATING CONTRACTOR. NO GUARANTEE OR WARRANTY, EITHER EXPRESSED OR IMPLIED, IS MADE AS TO THE ACCURACY OR THOROUGHNESS OF SUCH INFORMATION. IF MORE ACCURATE LOCATIONS OF UNDERGROUND UTILITIES OR PIPE LINES ARE REQUIRED, THE UTILITY OR PIPELINE WILL HAVE TO BE VERIFIED BY FIELD POTHOLING. CALVADA SURVEYING, INC. AND THE SURVEYOR OF RECORD SHALL NOT BE HELD LIABLE FOR THE LOCATION OF OR THE FAILURE TO NOTE THE LOCATION OF NON-VISIBLE UTILITIES OR PIPELINES.

Underground Service Alert
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

PREPARED FOR

WSP USA
3560 HYLAND AVE. SUITE 100
COSTA MESA, CA 92626
PHONE: (949) 574-7507

BASIS OF BEARINGS

THE BEARINGS SHOWN HEREON ARE BASED UPON THE CALIFORNIA COORDINATE SYSTEM OF 1983, (CCS83), ZONE 5, (2023.25) IN ACCORDANCE TO THE CALIFORNIA PUBLIC RESOURCES CODE SECTIONS 8801-8819, SAID BEARINGS ARE DETERMINED LOCALLY UPON FIELD-OBSERVED TIES TO THE FOLLOWING LEICA SMARTNET NORTH AMERICA (S.N.N.A.) CONTINUOUSLY OPERATING REFERENCE STATIONS (C.O.R.S.):

S.N.N.A. CASF:
NORTHING = 1800797.59' EASTING = 6537292.57'

S.N.N.A. CASM:
NORTHING = 1829162.68' EASTING = 6418730.55'

BENCHMARK

ELEVATIONS SHOWN HEREON ARE BASED UPON LOS ANGELES COUNTY BENCHMARK PY12058, ELEVATION 111.39 FEET (NAVD 88).

DESCRIPTION:
L&OPW TAG IN E CB EASTERN AVE 1FT N/O ECR (NOSE) W'LY COR GARFIELD

SITE INFORMATION

SITE ADDRESS: 5622 SHULL ST, BELL GARDENS, CA 90201

ASSESSOR'S PARCEL NOS.: 6227-034-900
6227-034-901
6227-034-902
6227-034-903
6227-034-904
6227-034-905
6227-034-906
6227-034-907

SURVEYOR OF RECORD

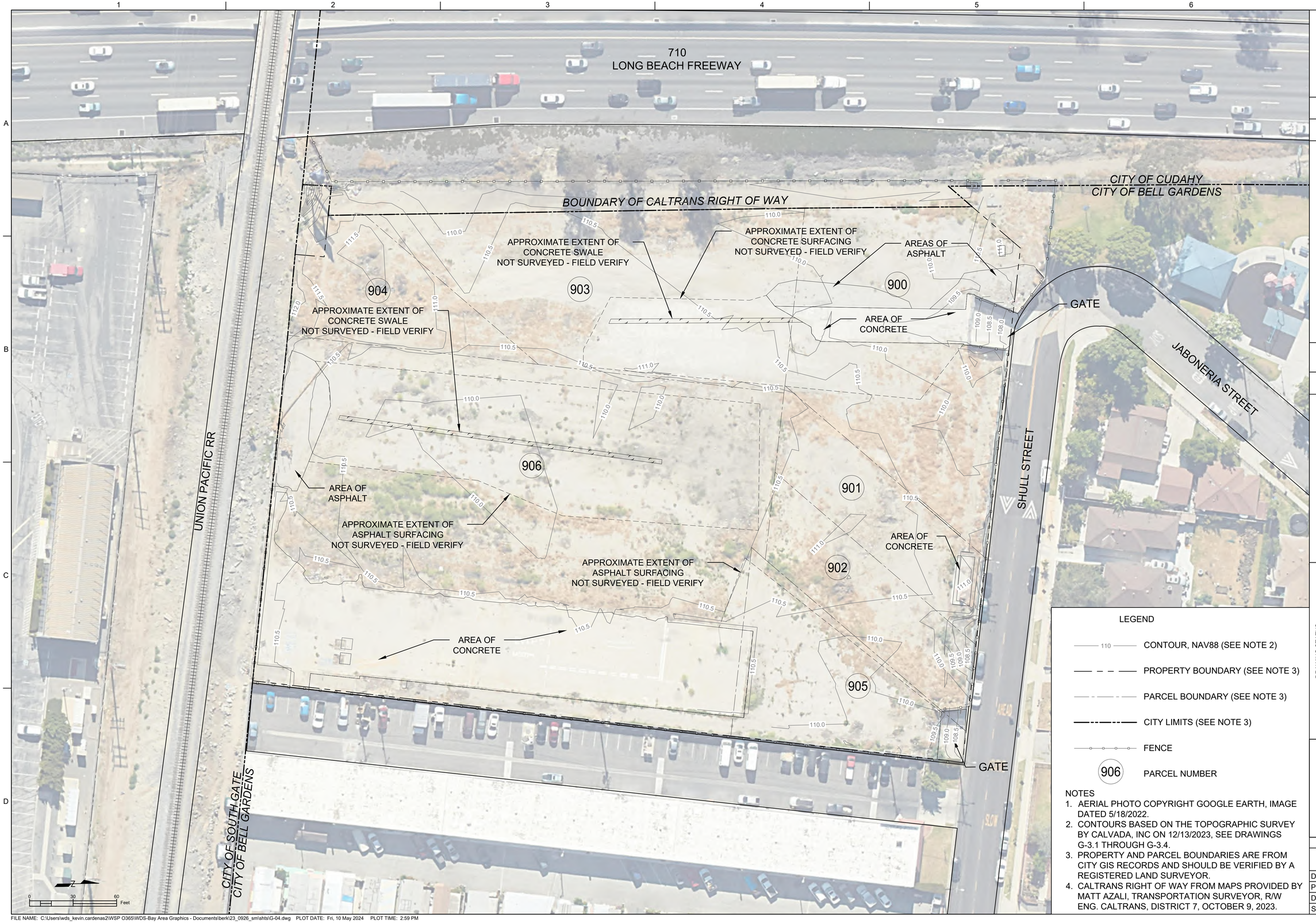
FIELD COMPLETION DATE: DECEMBER 13, 2023

REGISTERED LAND SURVEYOR
ARMANDO D. DUPONT
L.S. 7780
Date Signed: 12/19/2023
STATE OF CALIFORNIA

Armando D. DuPont
Registration No. 7780

CALVADA SURVEYING, INC.
411 Jenks Circle, Suite 205, Corona, CA 92878
Phone: 951-280-9960 Fax: 951-280-9746
Toll Free: 800-CALVADA www.calvada.com

EST. 1989 JOB NO. 23916



LEGEND

- CONTOUR, NAV88 (SEE NOTE 2)
- PROPERTY BOUNDARY (SEE NOTE 3)
- PARCEL BOUNDARY (SEE NOTE 3)
- CITY LIMITS (SEE NOTE 3)
- FENCE
- 906 PARCEL NUMBER

NOTES

1. AERIAL PHOTO COPYRIGHT GOOGLE EARTH, IMAGE DATED 5/18/2022.
2. CONTOURS BASED ON THE TOPOGRAPHIC SURVEY BY CALVADA, INC ON 12/13/2023, SEE DRAWINGS G-3.1 THROUGH G-3.4.
3. PROPERTY AND PARCEL BOUNDARIES ARE FROM CITY GIS RECORDS AND SHOULD BE VERIFIED BY A REGISTERED LAND SURVEYOR.
4. CALTRANS RIGHT OF WAY FROM MAPS PROVIDED BY MATT AZALI, TRANSPORTATION SURVEYOR, R/W ENG. CALTRANS, DISTRICT 7, OCTOBER 9, 2023.

REGISTERED PROFESSIONAL ENGINEER
ANDI COX
86649
Exp 6/30/24
CIVIL
STATE OF CALIFORNIA

NO.	DATE	DSGN	DR	CHK	APVD	BY
0	05/10/24	AC	KMC	CB	AHC	KMC

ISSUE FOR BID
REVISION
APVD AHC

SOIL REMEDIATION PROJECT
FORMER BERK OIL SITE
5614, 5622, AND 5636 SHULL STREET
CITY OF BELL GARDENS, CALIFORNIA

DRAWING STATUS
ISSUED FOR BID

EXISTING CONDITIONS PLAN
WITH AERIAL PHOTOGRAPH

WSP USA
Environment & Infrastructure, Inc.
3560 Hyland Ave, Suite 100
Costa Mesa, California, 94626
(949) 663-4100

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	05/10/2024
PROJ	CM20167712
DWG	G-4
SHEET	7 OF 14

FILE NAME: C:\Users\wds_kevin.cardenas2\WSP O365\WDS-Bay Area Graphics - Documents\berk\23_0926_sm\shts\G-04.dwg PLOT DATE: Fri, 10 May 2024 PLOT TIME: 2:59 PM

710
LONG BEACH FREEWAY

REMOVE EXISTING FENCE AND REPLACE WITH 6-FT HIGH CHAINLINK FENCE WITH WINDSCREEN (SEE NOTE 1)

CITY OF CUDAHY
CITY OF BELL GARDENS

BOUNDARY OF CALTRANS RIGHT OF WAY

INSTALL 6-FT HIGH CHAINLINK FENCE WITH WINDSCREEN (SEE NOTE 2)

APPROXIMATE EXTENT OF CONCRETE SWALE NOT SURVEYED - FIELD VERIFY

APPROXIMATE EXTENT OF CONCRETE SURFACING TO BE REMOVED

AREAS OF ASPHALT TO BE REMOVED

APPROXIMATE EXTENT OF CONCRETE SWALE NOT SURVEYED - FIELD VERIFY

AREA OF CONCRETE TO BE REMOVED

GATE

JABONERIA STREET

ATTACH WINDSCREEN TO FENCING ABOVE WALL

CONTRACTOR TO IMPLEMENT SITE-WIDE EROSION CONTROLS IN ACCORDANCE WITH THE SWPPP PREPARED BY THE ENGINEER

SHULL STREET

AREA OF ASPHALT TO BE REMOVED

APPROXIMATE EXTENT OF ASPHALT SURFACING TO BE REMOVED

AREA OF CONCRETE TO BE REMOVED

APPROXIMATE EXTENT OF ASPHALT SURFACING TO BE REMOVED

AREA OF CONCRETE TO BE REMOVED

SAWCUT

60 FT

PROTECT EXISTING WINDSCREEN IN PLACE

AREA OF CONCRETE TO REMAIN FOR TREATMENT SYSTEM

GATE

UNION PACIFIC RR

CITY OF SOUTH GATE
CITY OF BELL GARDENS

N
0 30 60 Feet

LEGEND

- CONTOUR (110)
- PROPERTY BOUNDARY
- CITY LIMITS
- EXISTING FENCE
- NEW FENCE (SEE NOTE 1)
- NEW TEMPORARY FENCE (SEE NOTE 2)
- AREA OF CONCRETE TO BE REMOVED
- AREA OF ASPHALT TO BE REMOVED

NOTES
1. CHAINLINK FENCE TO BE IN ACCORDANCE WITH CALTRANS STANDARD DRAWING A85.
2. TEMPORARY FENCE TO BE POST-DRIVEN CHAINLINK FENCE.
3. FOR EXISTING CONDITIONS SURVEY NOTES, REFER TO DRAWING G-4.

REGISTERED PROFESSIONAL ENGINEER
ANDI COX
66649
Exp 6/30/24
CIVIL
STATE OF CALIFORNIA

NO.	DATE	DSGN	DR	CHK	APVD	BY
0	05/10/24	AC	KMC	CB	APVD	KMC
						AHC
ISSUE FOR BID / REVISION						AHC

SOIL REMEDIATION PROJECT
FORMER BERK OIL SITE
5614, 5622, AND 5636 SHULL STREET
CITY OF BELL GARDENS, CALIFORNIA

DRAWING STATUS
ISSUED FOR BID

SITE PREPARATION PLAN

WSP USA
Environment & Infrastructure, Inc.
3560 Hyland Ave, Suite 100
Costa Mesa, California, 94626
(949) 663-4100

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	05/10/2024
PROJ	CM20167712
DWG	C-1
SHEET	8 OF 14

FILE NAME: C:\Users\wds_kevin.cardenas2\WSP O365\WDS-Bay Area Graphics - Documents\berk\23_0926_sm\shts\C-01.dwg PLOT DATE: Fri, 10 May 2024 PLOT TIME: 2:59 PM

710
LONG BEACH FREEWAY

AREA 2
27,160 SF, 2-4 FT DEEP
SEE DWGS C-4 and C-5 FOR DETAILS

AREA 1
5,900 SF, 2-6 FT DEEP
SEE DWG C-3 FOR DETAILS

AREA 3
16,200 SF, 2-4 FT DEEP
SEE DWG C-6 FOR DETAILS

BOUNDARY OF CALTRANS RIGHT OF WAY

CITY OF CUDAHY
CITY OF BELL GARDENS

GATE

JABONERIA STREET

SHULL STREET

UNION PACIFIC RR

CITY OF SOUTH GATE
CITY OF BELL GARDENS

GATE

LEGEND

- CONTOUR (110)
- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- EXCAVATION AREA
- CITY LIMITS
- EXISTING FENCE
- NEW FENCE (SEE NOTE 1)
- NEW TEMPORARY FENCE (SEE NOTE 2)

NOTES
1. CHAINLINK FENCE TO BE IN ACCORDANCE WITH CALTRANS STANDARD DRAWING A85.
2. TEMPORARY FENCE TO BE POST-DRIVEN CHAINLINK FENCE.
3. FOR EXISTING CONDITIONS SURVEY NOTES, REFER TO DRAWING G-4.

N
0 30 60 Feet

REGISTERED PROFESSIONAL ENGINEER
ANDI COX
66649
Exp 6/30/24
CIVIL
STATE OF CALIFORNIA

NO.	DATE	DSGN	DR	CHK	APVD	BY
0	05/10/24	AC	KMC	CB	APVD	KMC AHC
						AHC APVD

ISSUE FOR BID

SOIL REMEDIATION PROJECT
FORMER BERK OIL SITE
5614, 5622, AND 5636 SHULL STREET
CITY OF BELL GARDENS, CALIFORNIA

DRAWING STATUS
ISSUED FOR BID

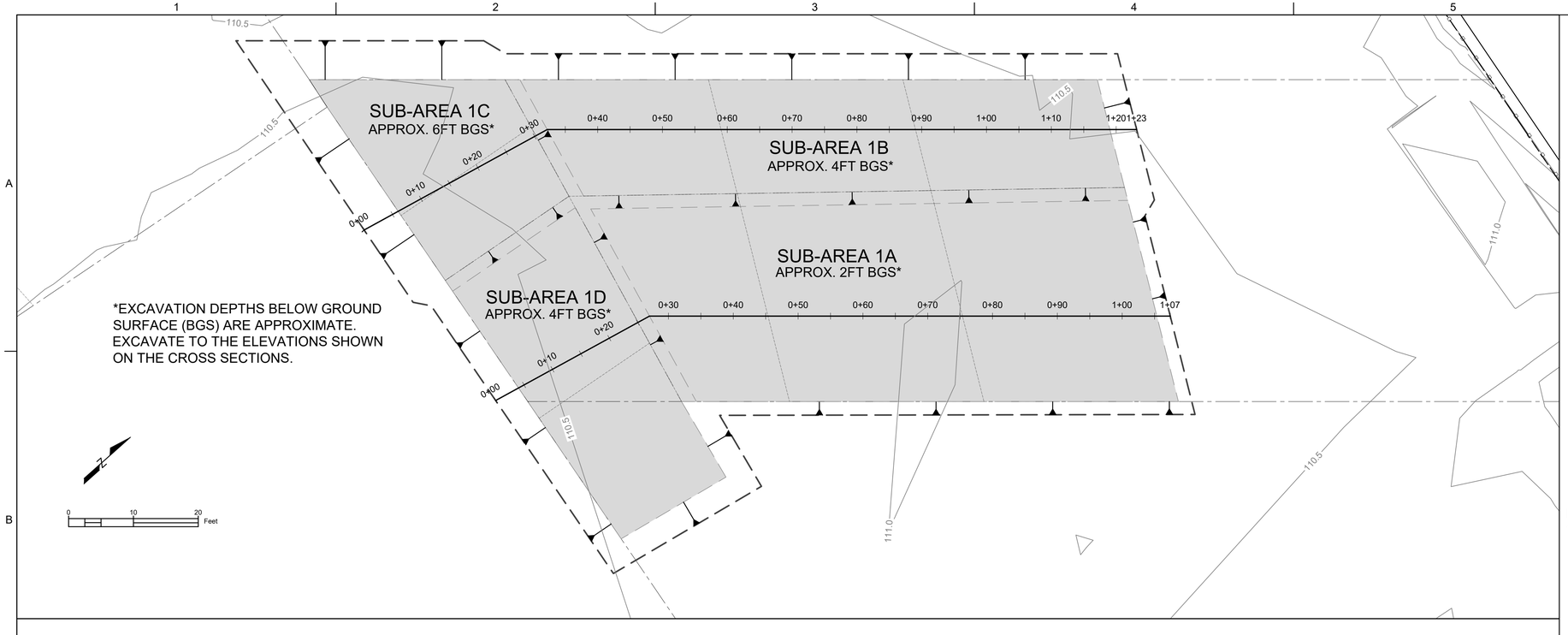
OVERALL EXCAVATION LAYOUT

WSP USA
Environment & Infrastructure, Inc.
3560 Hyland Ave, Suite 100
Costa Mesa, California, 94626
(949) 663-4100

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	05/10/2024
PROJ	CM20167712
DWG	C-2
SHEET	9 OF 14

FILE NAME: C:\Users\wds_kevin.cardenas2\WSP O365\WDS-Bay Area Graphics - Documents\berk\23_0926_sm\shts\C-02.dwg PLOT DATE: Fri, 10 May 2024 PLOT TIME: 2:59 PM



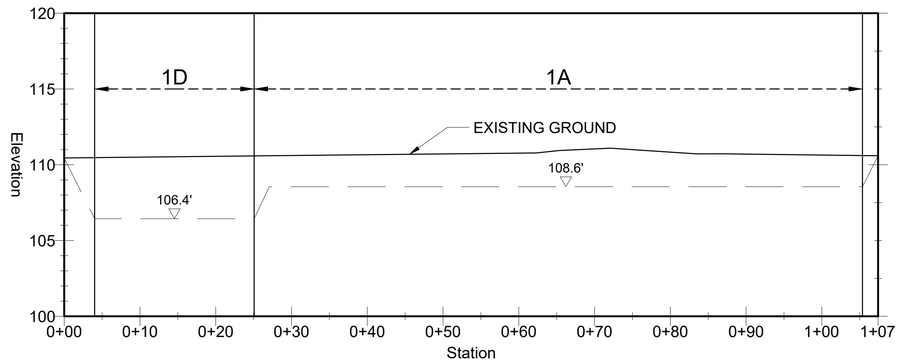
*EXCAVATION DEPTHS BELOW GROUND SURFACE (BGS) ARE APPROXIMATE. EXCAVATE TO THE ELEVATIONS SHOWN ON THE CROSS SECTIONS.

LEGEND

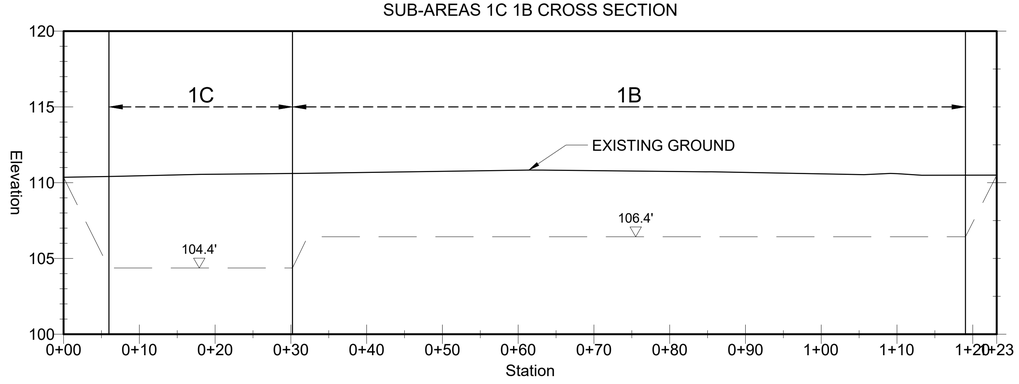
- CONTOUR
- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- CITY LIMITS
- EXISTING FENCE
- OUTER EXCAVATION BOUNDARY
- INNER EXCAVATION BOUNDARY
- EXCAVATION AREA
- CONFIRMATION SAMPLING GRID
- TOP OF EXCAVATION
- BOTTOM OF EXCAVATION

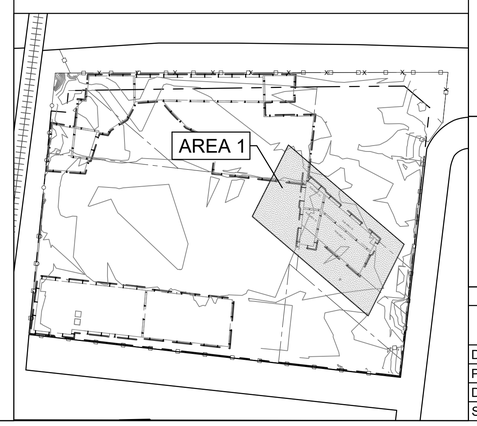
NOTES
1. FOR EXISTING CONDITIONS SURVEY NOTES, REFER TO DRAWING G-4.

SUB-AREAS 1D 1A CROSS SECTION



SUB-AREAS 1C 1B CROSS SECTION





REGISTERED PROFESSIONAL ENGINEER
ANDI COX
86649
Exp 6/30/24
CIVIL
STATE OF CALIFORNIA

NO.	DATE	DSGN	DR	CHK	APVD
0	05/10/24	AC	KMC	CB	APVD

ISSUE FOR BID

NO.	REVISION	BY	APVD
		KMC	AHC

AHC

SOIL REMEDIATION PROJECT
FORMER BERK OIL SITE
5614, 5622, AND 5636 SHULL STREET
CITY OF BELL GARDENS, CALIFORNIA

DRAWING STATUS
ISSUED FOR BID

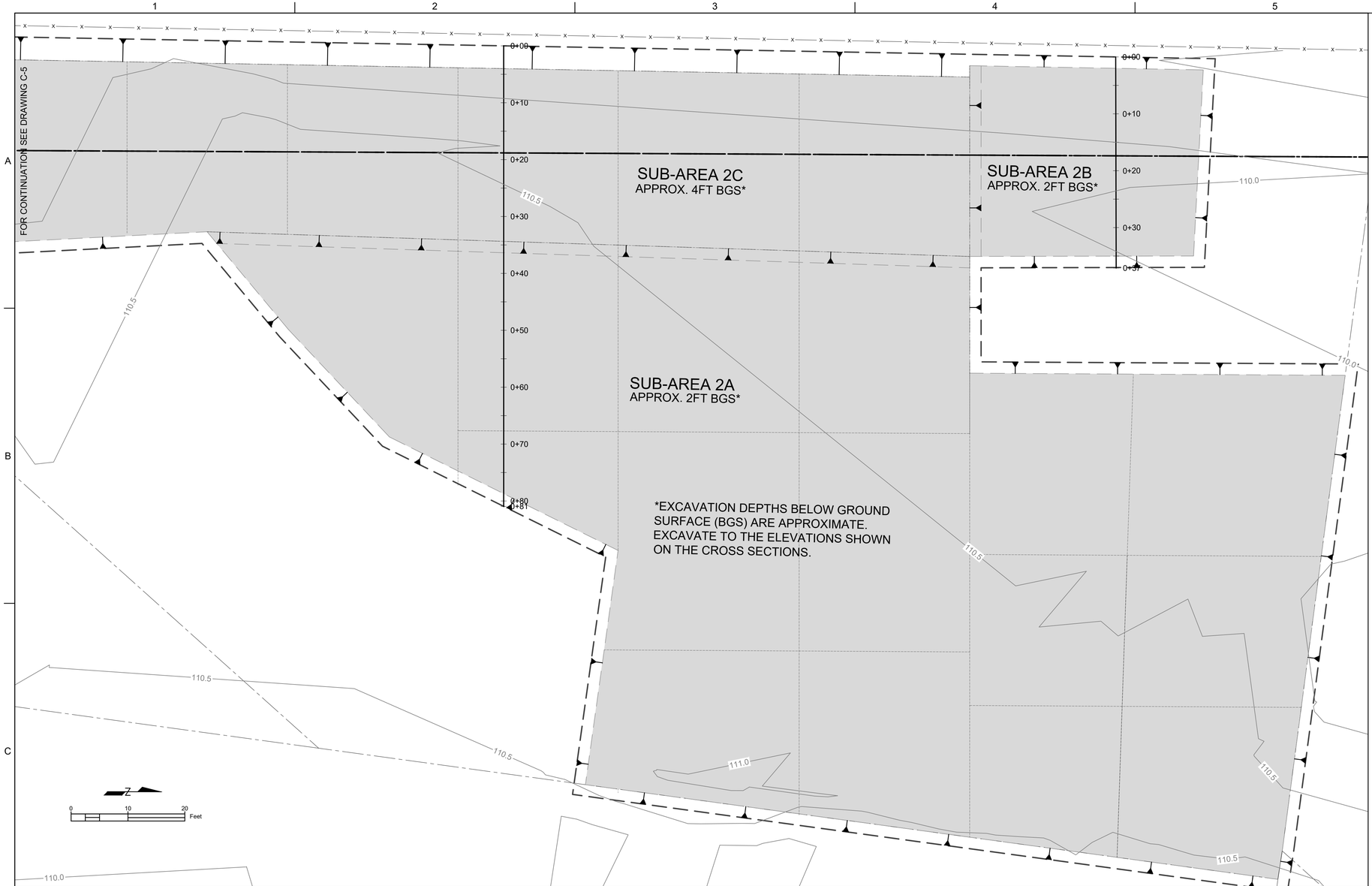
EXCAVATION PLAN -
AREA 1 - GRIDS 1A, 1B, 1C, 1D

WSP USA
Environment and Infrastructure, Inc.
3560 Hyland Ave, Suite 100
Costa Mesa, California, 94626
(949) 663-4100

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	05/10/2024
PROJ	CM20167712
DWG	C-3
SHEET	10 OF 14

FILE NAME: C:\Users\wds_kevin.cardenas2\WSP O365\WDS-Bay Area Graphics - Documents\berk\23_0926_sm\shts\C-03.dwg PLOT DATE: Fri, 10 May 2024 PLOT TIME: 2:59 PM

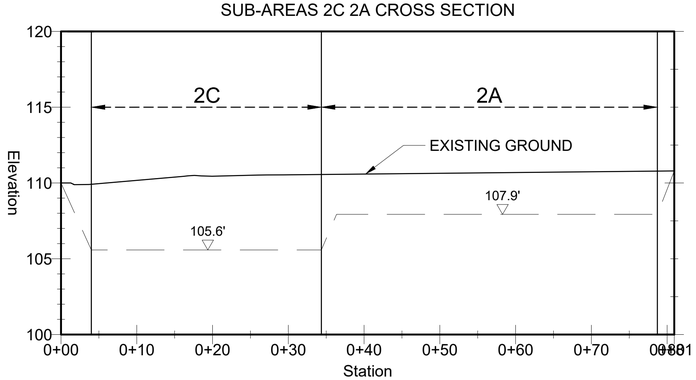


LEGEND

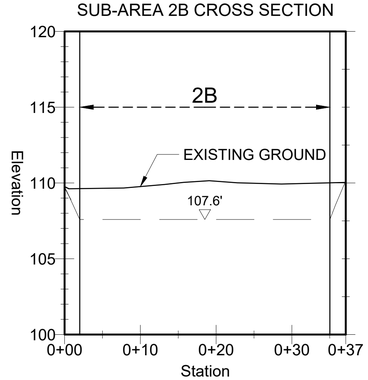
- CONTOUR
- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- CITY LIMITS
- EXISTING FENCE
- NEW FENCE (SEE NOTE 1)
- OUTER EXCAVATION BOUNDARY
- INNER EXCAVATION BOUNDARY
- EXCAVATION AREA
- CONFIRMATION SAMPLING GRID
- TOP OF EXCAVATION
- BOTTOM OF EXCAVATION

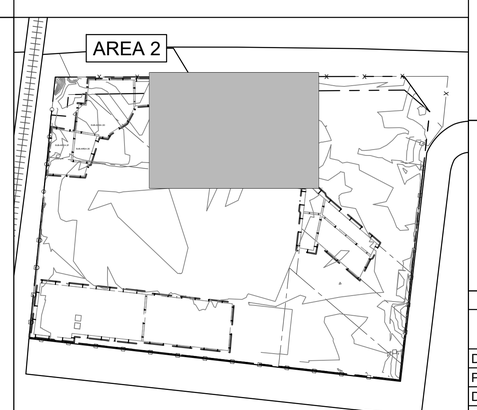
NOTES
1. CHAINLINK FENCE TO BE IN ACCORDANCE WITH CALTRANS STANDARD DRAWING A85.
2. FOR EXISTING CONDITIONS SURVEY NOTES, REFER TO DRAWING G-4.

SUB-AREAS 2C 2A CROSS SECTION



SUB-AREA 2B CROSS SECTION





NO.	DATE	DSGN	DR	CHK	APVD	BY
0	05/10/24	AC	KMC	CB	APVD	KMC AHC APVD

ISSUE FOR BID
REVISION

SOIL REMEDIATION PROJECT
FORMER BERK OIL SITE
5614, 5622, AND 5636 SHULL STREET
CITY OF BELL GARDENS, CALIFORNIA

DRAWING STATUS
ISSUED FOR BID

EXCAVATION PLAN -
AREA 2 – GRIDS 2A, 2B, 2C

WSP USA
Environment and Infrastructure, Inc.
3560 Hyland Ave, Suite 100
Costa Mesa, California, 94626
(949) 663-4100

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	05/10/2024
PROJ	CM20167712
DWG	C-4
SHEET	11 OF 14

FILE NAME: C:\Users\wds_kevin.cardenas2\WSP O365\WDS-Bay Area Graphics - Documents\berk\23_0926_sm\shts\C-04_C-05.dwg PLOT DATE: Fri, 10 May 2024 PLOT TIME: 3:00 PM

*EXCAVATION DEPTHS BELOW GROUND SURFACE (BGS) ARE APPROXIMATE. EXCAVATE TO THE ELEVATIONS SHOWN ON THE CROSS SECTIONS.

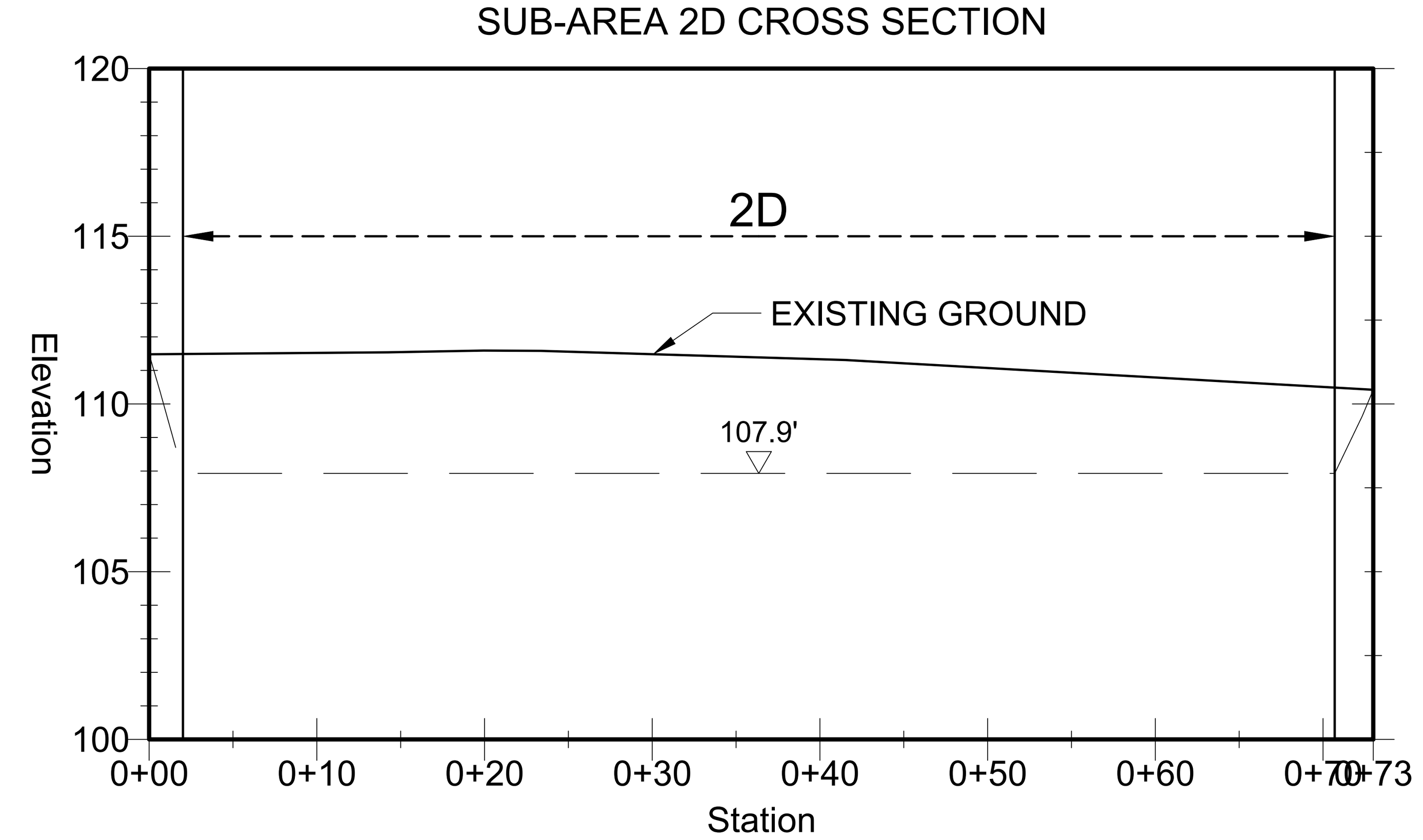
LEGEND

- CONTOUR
- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- CITY LIMITS
- EXISTING FENCE
- NEW FENCE (SEE NOTE 1)
- NEW TEMPORARY FENCE (SEE NOTE 2)
- OUTER EXCAVATION BOUNDARY
- INNER EXCAVATION BOUNDARY
- EXCAVATION AREA
- CONFIRMATION SAMPLING GRID
- TOP OF EXCAVATION
- BOTTOM OF EXCAVATION

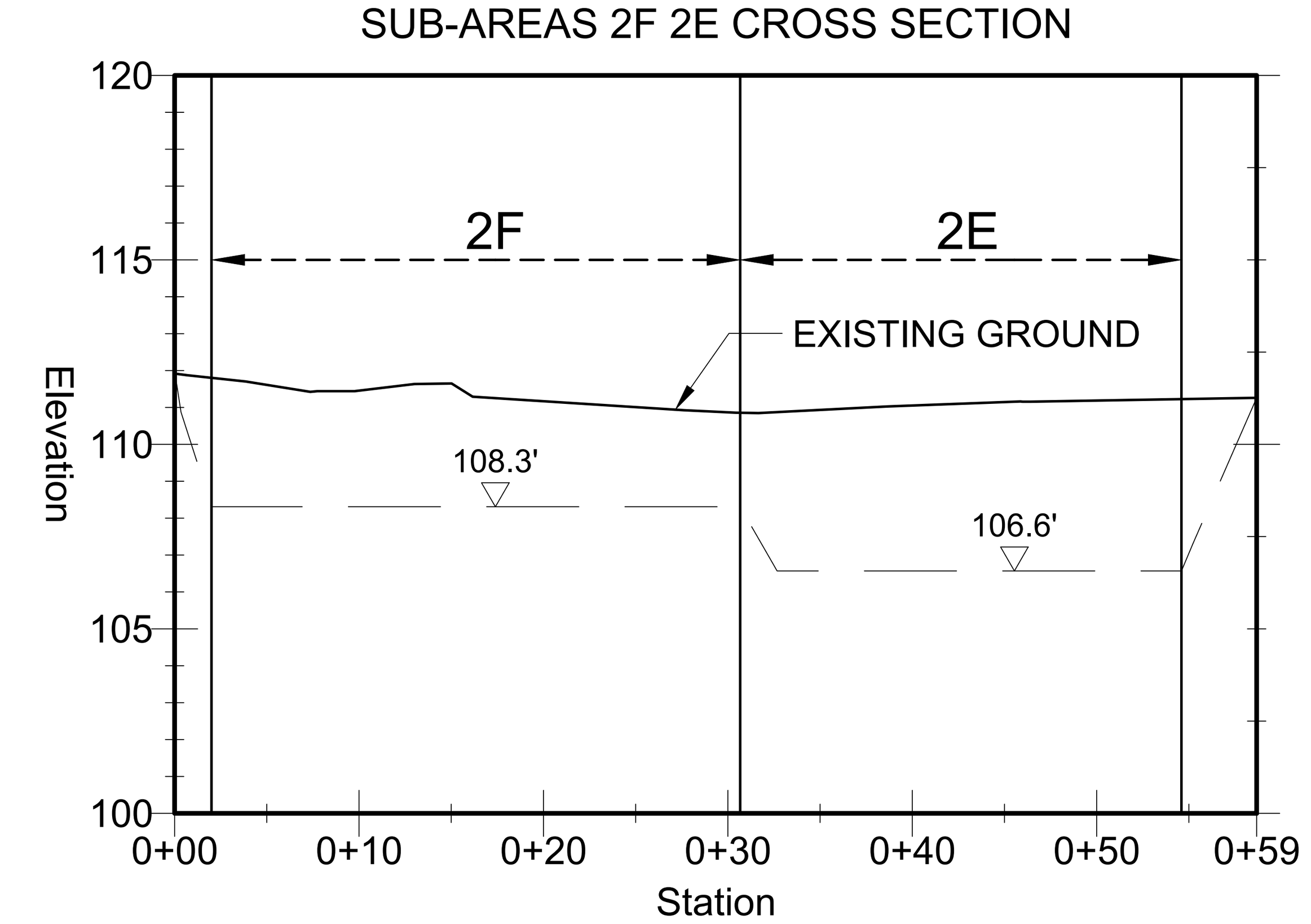
NOTES

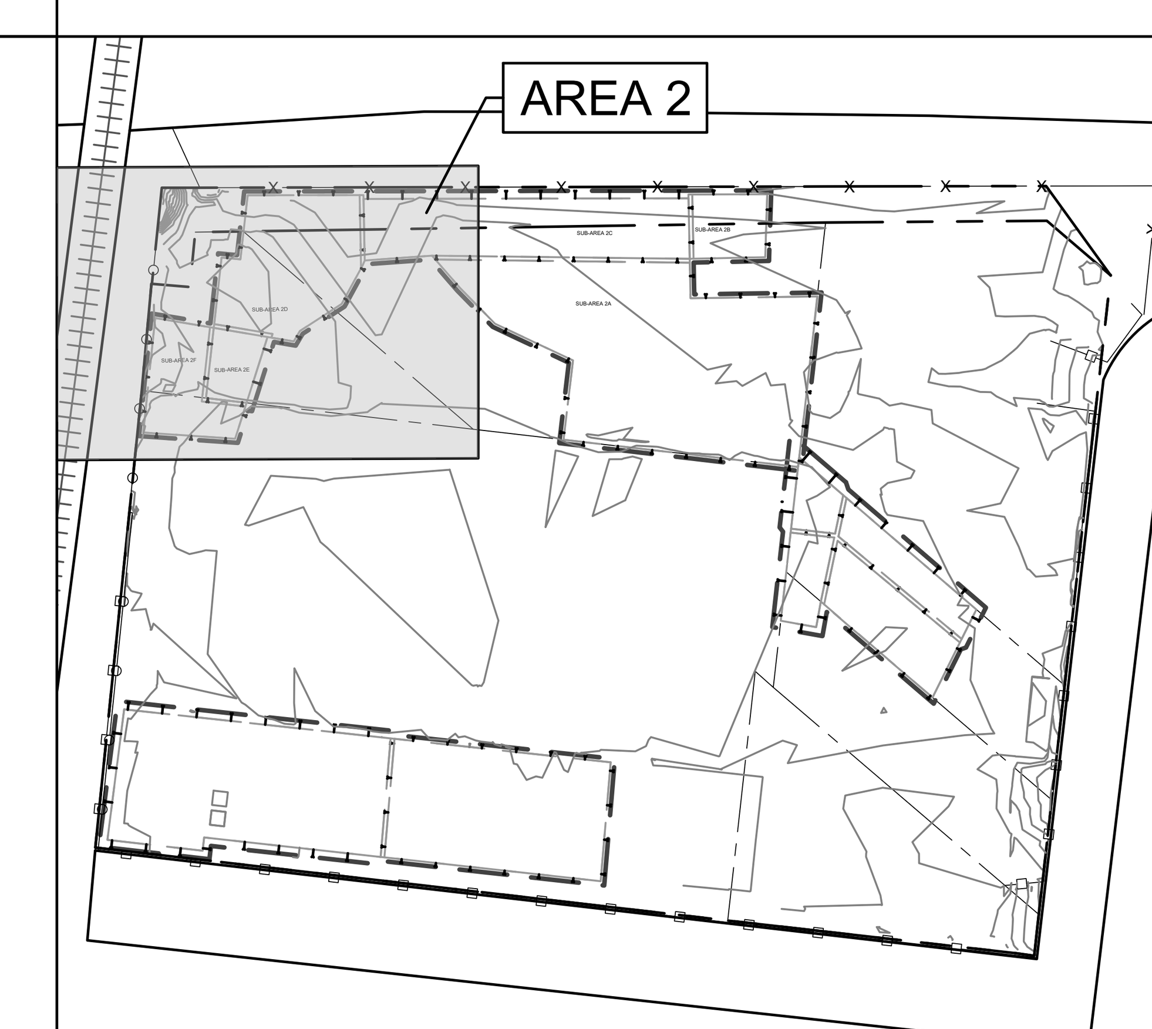
1. CHAINLINK FENCE TO BE IN ACCORDANCE WITH CALTRANS STANDARD DRAWING A85.
2. TEMPORARY FENCE TO BE POST-DRIVEN CHAINLINK FENCE.
3. FOR EXISTING CONDITIONS SURVEY NOTES, REFER TO DRAWING G-4.

SUB-AREA 2D CROSS SECTION



SUB-AREAS 2F 2E CROSS SECTION





ANDI COX
66649
Exp 4/30/24
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

NO.	DATE	REVISION	BY	APVD
0	05/10/24	ISSUE FOR BID	KMC	AHC

DSGN	DR	CHK	APVD
AC	KMC	CB	AHC

SOIL REMEDIATION PROJECT
FORMER BERK OIL SITE
5614, 5622, AND 5636 SHULL STREET
CITY OF BELL GARDENS, CALIFORNIA

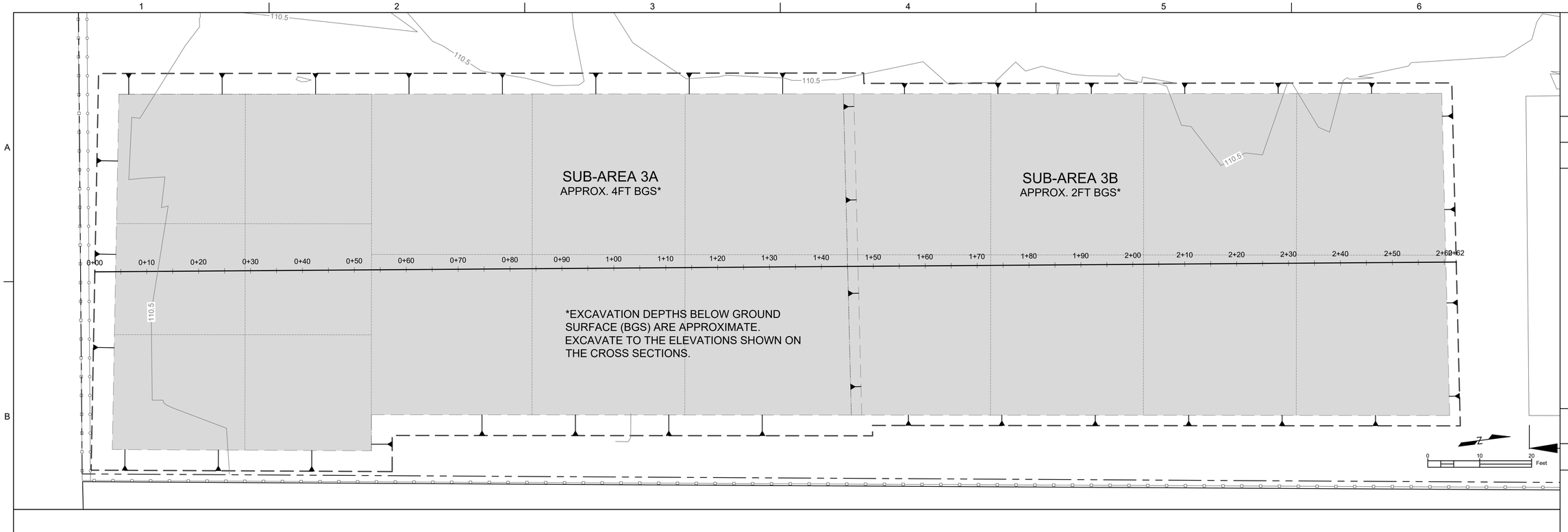
DRAWING STATUS
ISSUED FOR BID

EXCAVATION PLAN - AREA 2 – GRIDS 2D, 2E, 2F

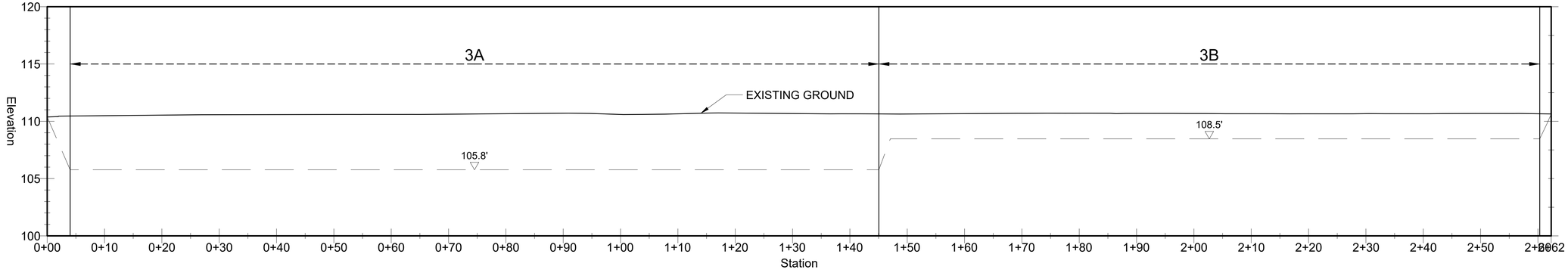
WSP USA
Environment and Infrastructure, Inc.
3560 Hyland Ave, Suite 100
Costa Mesa, California, 94626
(949) 663-4100

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	05/10/2024
PROJ	CM20167712
DWG	C-5
SHEET	12 OF 14



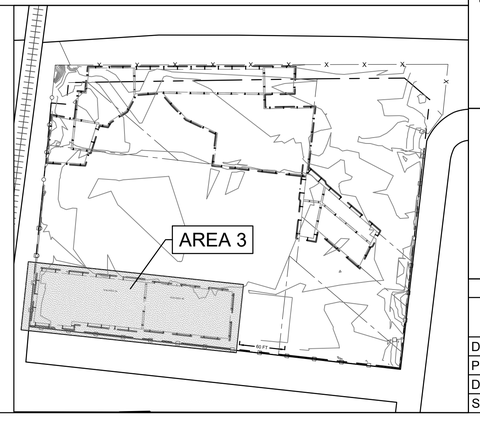
SUB-AREAS 3A 3B CROSS SECTION



LEGEND

- CONTOUR (110)
- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- CONCRETE
- EXISTING FENCE
- NEW TEMPORARY FENCE (SEE NOTE 1)
- OUTER EXCAVATION BOUNDARY
- INNER EXCAVATION BOUNDARY
- CITY LIMITS
- EXCAVATION AREA
- CONFIRMATION SAMPLING GRID
- TOP OF EXCAVATION
- BOTTOM OF EXCAVATION

NOTES
1. TEMPORARY FENCE TO BE POST-DRIVEN CHAINLINK FENCE.
2. FOR EXISTING CONDITIONS SURVEY NOTES, REFER TO DRAWING G-4.



REGISTERED PROFESSIONAL ENGINEER
ANDI COX
86649
Exp 6/30/24
CIVIL
STATE OF CALIFORNIA

NO.	DATE	DSGN	DR	CHK	APVD
0	05/10/24	AC	KMC	CB	AHC

ISSUE FOR BID

NO.	BY	APVD
REVISION	KMC	AHC

SOIL REMEDIATION PROJECT
FORMER BERK OIL SITE
5614, 5622, AND 5636 SHULL STREET
CITY OF BELL GARDENS, CALIFORNIA

DRAWING STATUS
ISSUED FOR BID

EXCAVATION PLAN - AREA 3 – GRIDS 3A, 3B

WSP USA
Environment & Infrastructure, Inc.
3560 Inland Empire Blvd, Suite 100
Costa Mesa, California, 94626
(949) 663-4100

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	05/10/2024
PROJ	CM20167712
DWG	C-6
SHEET	13 OF 14

710
LONG BEACH FREEWAY

BOUNDARY OF CALTRANS RIGHT OF WAY

CITY OF CUDAHY
CITY OF BELL GARDENS

UNION PACIFIC RR

SHULL STREET

GATE

GRAVEL SURFACING
SEE DETAIL

GATE

110.00
110.50
111.00
109.50
109.00
108.50
108.00

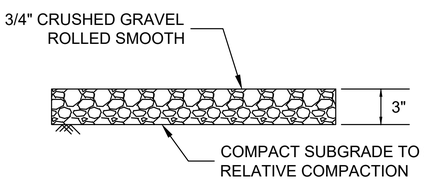
N

0 30 60 Feet

LEGEND

- 110 — GRADING CONTOUR (SEE NOTE 1)
- 110 — SURVEY CONTOUR
- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- AREA OF GRAVEL SURFACING
- CITY LIMITS
- EXISTING FENCE
- NEW FENCE (SEE NOTE 2)
- NEW TEMPORARY FENCE (SEE NOTE 3)

NOTES
1. MATCH EXISTING GRADES AT SITE BOUNDARY
2. CHAINLINK FENCE TO BE IN ACCORDANCE WITH CALTRANS STANDARD DRAWING A85.
3. TEMPORARY FENCE TO BE POST-DRIVEN CHAINLINK FENCE.
4. FOR EXISTING CONDITIONS SURVEY NOTES, REFER TO DRAWING G-4.



DETAIL OF GRAVEL SURFACING

REGISTERED PROFESSIONAL ENGINEER
ANDI COX
66649
Exp 6/30/24
CIVIL
STATE OF CALIFORNIA

NO.	DATE	DSGN	DR	CHK	APVD
0	05/10/24	AC	KMC	CB	AHC

ISSUE FOR BID

BY	APVD
KMC	AHC

SOIL REMEDIATION PROJECT
FORMER BERK OIL SITE
5614, 5622, AND 5636 SHULL STREET
CITY OF BELL GARDENS, CALIFORNIA

DRAWING STATUS
ISSUED FOR BID

SITE RESTORATION AND GRADING PLAN

WSP USA
Environment & Infrastructure, Inc.
3560 Hyland Ave, Suite 100
Costa Mesa, California, 94626
(949) 663-4100

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE 05/10/2024
PROJ CM20167712
DWG C-7
SHEET 14 OF 14

FILE NAME: C:\Users\wds_kevin.cardenas2\WSP O365\WDS-Bay Area Graphics - Documents\berk\23_0926_sm\shts\C-07.dwg PLOT DATE: Fri, 10 May 2024 PLOT TIME: 3:03 PM

APPENDIX “B-R1”

TECHNICAL SPECIFICATIONS FOR REMEDIATION

SECTION 01 10 00

SUMMARY OF WORK

PART 1 - GENERAL

1.1 PROJECT SUMMARY

The objective of the Work is to remove impacted soils containing polycyclic aromatic hydrocarbons (PAHs) and lead from the Former Berk Oil Site; referred to herein as "the Site". The Work is part of the remedial action described in the Draft Removal Action Work Plan (RAW, WSP USA Environment and Infrastructure Inc. ["WSP"], May 2023) for the Site. The RAW is included as an attachment to these Specifications. Contractor is required to have significant previous experience in this work and the ability to complete work plans and other submittal requirements in a comprehensive and expeditious manner in line with the requirements of these Specifications, the Drawings, and regulatory statutes.

The Owner is the City of Bell Gardens.

The Engineer is WSP.

A. The major components of the Work are summarized below:
   1. Preparation of pre-construction documents and work plans (See Section 1.5)
   2. Removal and disposal of debris, asphalt, and concrete pads.
   3. Site preparation, including fencing.
   4. Establishment, maintenance, and monitoring of environmental controls.
   5. Excavation and transportation and disposal of RCRA-hazardous, Cal-hazardous, and non-hazardous soils to the limits on the Drawings.
   6. Additional excavation, if necessary, based on confirmation sampling of the excavation limits by the Engineer.
   7. Import backfill and compaction of excavations.
   8. Restoration of the site, including grading and gravel surfacing.
   9. Site surveying during construction, and of final limits of excavation.

B. The RAW includes a more detailed description of the project and information relating to subsurface investigations performed at the Site. Contractor is expected to be familiar with the regulatory requirements described therein.

C. As defined in the RAW, the **remedial removal goals** are as follows:
   1. Benzo[a]pyrene Toxic Equivalency Quotient (BaP TEQ) below the site background threshold value (BTV) of 0.90 mg/kg.
   2. Lead concentrations below the DTSC residential screening level (DTSC-SL) of 80 mg/kg.

D. Refer to the RAW, Section 6.1 and Appendix B, for information on where soils are likely to be profiled RCRA-hazardous, Cal-hazardous, and non-hazardous soils. Contractor shall

segregate soil excavated from these areas for profiling. Such segregation and profiling will be approved by the Engineer before commencing excavation. Contractor is responsible for profiling of soil in accordance with their selected and approved landfill disposal facility.

1.2 REMEDIATION SPECIFICATIONS

A. The RAW describes the general requirements for implementation of the remedy. The final Specifications and Drawings are referenced in and form the basis of the Scope described in the Summary of Work.

1.3 GENERAL PERFORMANCE REQUIREMENTS

A. The overall objective is to complete the work in an efficient and safe manner while minimizing impacts to the general public. Contractor shall plan and implement construction, including rate of excavation and area of excavation exposed at any given time, to meet the following general criteria.

B. **Dust Control:** Manage the area of exposed soil as necessary so that dust can be effectively controlled to protect workers and the public in accordance with the requirements of Section 015719 “Temporary Environmental Controls”. Dust shall not be visible beyond the boundaries of the Site. Should additional dust control be required, Contractor shall limit the size of the excavation or provide additional dust mitigation measures in accordance with Section 015719 “Temporary Environmental Controls”

C. **Soil Management:** Control the quantity of soil excavated such that Contractor can effectively comply with the requirements of Section 017419 “Construction Waste Management and Disposal” and the requirements of the Transportation Plan described in Section 026100 “Removal and Disposal of Contaminated Soils”**.** Implement soil management operations to control dust and vapors in accordance with Paragraph B above.

D. As described in Section 015719, 017419, and 013529, Contractor shall appoint a Certified Lead Supervisor (CLS) to oversee the work. The CLS will have authority over dust control and soil management. The Lead Supervisor shall a) complete a minimum of 40 hours of training and b) have at least one year of experience as a certified lead worker or two years of experience in lead-related construction or a related filed to be qualified for submitting an application to CDPH to become a CLS (Title 17, CCR, Section 36100 (a)(1)).

1.4 PERMITS

A. Contractor will obtain a Grading Permit for the Work from the City of Bell Gardens covering land disturbances, land cuts and fills, soil storage, and erosion and sedimentation resulting from clearing and grading activities. Contractor shall be responsible to complete and pull the approved Grading Permit.

B. Contractor will obtain an Air Permit for the Work from South Coast Air Quality Management District covering land disturbances, land cuts and fills, soil storage, and erosion and sedimentation resulting from clearing and grading activities.

C. Contractor will apply for and purchase a Construction General Permit (CGP) from SWRCB, if required. The Engineer has prepared a Stormwater Pollution Prevention Plan (SWPPP) which will be implemented by the Contractor whether the CGP is required or not. The Engineer's Qualified SWPPP Practitioner (QSP) will monitor implementation of the SWPPP.

D. Contractor shall be aware of other permit requirements that may be applicable based on construction work practices. These may include confined space or other permitting and/or notification requirements from the California Division of Occupational Safety and Health (Cal/OSHA) and other local, state, and federal agencies.

E. Specification of permits applying to the Work shall not limit or restrict the obligation of the Contractor in the performance of the Work in each instance to comply with any and all other permits that may be required by agencies having authority over the Work.

1.5 PRE-CONSTRUCTION DOCUMENTS and WORK PLANS

A. The following table lists required pre-construction documents and responsibility for preparation.

Document	**Prepared by**	**Reference to Requirements**
Health and Safety Plan*	Contractor	Described in RAW. Refer to Section 013529 for details
Decontamination Plan**	Contractor	Included in the RAW. Additional requirements in Sections 013529, 015719, and 017419
Quality Assurance (QA) / Quality Control (QC) Plan	WSP	Included in the RAW. Implemented by WSP for sampling and analysis of soil samples for confirmation of limits of excavation.
Stormwater Pollution Prevention Plan	WSP	Implemented by Contractor. Section 015719
Waste Management Plan	Contractor	Sections 017419 and 026100
Dust Control and Monitoring Plan**	Contractor	Included in the RAW. Also see Section 015719
Transportation Plan*	Contractor	Described in the RAW. Additional requirements in Section 015719
Soil Management Plan*	Contractor	Described in the RAW. Requirements in Sections 015719, 017419, 026100, and 312300
Construction Management Plan	Contractor	Sections 312300, 026100, and 015719

* Described in the RAW. Plan not provided.
** General versions of each of these plans are provided in the RAW. Contractor is responsible for developing the implementation schedule, SMP, and TP, DP, and DCMP and any other required supporting document(s), with site-specific details to support safe and effective removal of impacted soil from the site.

To guide the Contractor in the preparation of these plans, in Appendix D, the Engineer has included draft templates. These templates are provided for general guidance. The Contractor is responsible for ensuring that the content of the Plans is in accordance with the Specifications and all regulatory requirements.

B. The Construction Management Plan shall include other pre-construction submittals required by these Specifications, including:

1. Schedule (Section 013200)
2. A Temporary Facilities Layout Plan, consisting of a scaled drawing showing:
   a. Locations of ingress and egress
   b. Zones described in the HASP
   c. Stockpiles
   d. Layout of all equipment, including soil stabilization facilities, if used
   e. Site office and sanitary facilities
   f. Temporary security fencing
3. Scaled plans showing the phasing of the work including sequencing of excavation areas, and locations of equipment and temporary facilities during each phase of construction, if different than described in Layout Plan.
4. List of key personnel and contact information
5. List of proposed subcontractors and suppliers
6. Format for construction progress documentation (Section 013200)
7. Pre- construction site survey, and procedures for controlling layout of the excavations and method for ensuring excavation to correct depth.

1.6 BID ITEM DESCRIPTIONS

A. A summary of the general content of the Contract Bid Items is included with the Bid Form. Refer to the Specification and Drawings for a complete description of the Contract work requirements.

B. Work for each Bid Item shall be coordinated with other Work and shall be conducted in accordance with all other requirements of the Contract Documents.

BID ITEM GROUP A – WORK PLANS

This bid group covers the preparation of work plans required to be approved by the Engineer before mobilization to the site.

Bid Item A.1 – Prepare Health and Safety Plan (HASP) (lump sum). Contractor shall prepare a site-specific Health in accordance with these Specifications. WSP's HASP is provided as guide from which the bidder may extract information about the site and the nature of the chemicals of

concern. However, Contractor shall be responsible for preparing its own HASP covering all aspects of the work they are to undertake.

Bid Item A.2 – Prepare Soil Management Plan (SMP) (lump sum). Contractor shall prepare a site-specific SMP in accordance with the requirements of Paragraph 1.5 of this Summary of Work and other referenced sections of the Specifications.

Bid Item A.3 – Prepare Transportation Plan (lump sum). Contractor shall prepare a site-specific Transportation Plan in accordance with the requirements of Paragraph 1.5 of this Summary of Work and other referenced sections of the Specifications.

Bid Item A.4 – Prepare Site-Specific Decontamination Plan (lump sum). Contractor shall prepare a site-specific Decontamination Plan in accordance with the requirements of Paragraph 1.5 of this Summary of Work and other referenced sections of the Specifications.

Bid Item A.5 – Prepare Site-Specific Dust Control and Monitoring Plan (DCMP) (lump sum). Contractor shall prepare a DCMP in accordance with the requirements of Paragraph 1.5 of this Summary of Work and other referenced sections of the Specifications.

Bid Item A.6 – Prepare Construction Management Plan (CMP) (lump sum). Contractor shall prepare a CMP in accordance with the requirements of Paragraph 1.5 of this Summary of Work and other referenced sections of the Specifications.

BID ITEM GROUP B – MOBILIZATION AND SITE PREPARATION

Item B.1 – Mobilization (lump sum): This Bid Item includes work to complete administrative requirements and Administrative Submittals per Section 013300 – Submittal Procedures, Project Schedule, product data, and various other submittals not included under Bid Item Group A – Work Plans. This Bid Item also includes providing documentation as required by Section 013200 – Construction Progress Documentation and Section 017839 – Project Record Documents. This Bid Item also includes mobilization of all personnel, equipment, and supplies to the Site necessary to complete the Work, including subsurface utilities identification per Section 011400 “Work Restrictions”, and other Division 1 requirements not specifically called out in other Bid Items. Permitting activities shall be included in this item. Work to comply with Health and Safety Requirements per Section 013529 and Temporary Environmental Controls per Section 015719 shall not be included in this Bid Item.

Item B.2 – Install Chain Link Fencing and Windscreen – 6 Feet High (linear feet): Install chain link fencing at the locations shown on the Drawings. Work to be completed in accordance with standards and instruction provided on the drawings.

Item B.3 – Install Caltrans Fence and Windscreen: Chain link fence per Caltrans standard detail with windscreen during the duration of the Work.

Item B.4 - Provide and Install Environmental Controls (stormwater BMPs, dust control, decontamination station) (lump sum): This bid item covers the set-up of the environmental controls described in the Work Plans in Bid Group A, the SWPPP, and all related sections of the Specifications. Operating, monitoring, and maintaining controls is under Bide Item C.1.

Item B.5 - Demolish Existing Site Concrete Paving and Recycle/Dispose (square feet): This Bid Item shall include all labor, equipment, materials, and tools required to sawcut, remove, load

and transport demolished concrete to an off-site facility for recycling or disposal as set forth on the Drawings. Site concrete is estimated to be 4 inches thick.

Item B.6 - Demolish Existing Site Asphalt Paving and Recycle/Dispose (square feet): This Bid Item shall include all labor, equipment, materials, and tools required to sawcut, remove, load and transport demolished asphalt to an off-site facility for recycling or disposal as set forth on the Drawings. Site asphalt is estimated to be 3 inches thick.

Item B.7 - Site Clearing and Debris Removal (lump sum): This Bid Item shall include removal from the site of all miscellaneous debris, trash, and vegetation and recycling or legally disposing. Contractor shall inspect the site prior to bidding to determine quantities of materials.

Item B.8- Surveying (lump sum): This Bid Item includes all personnel, materials, and equipment to perform a pre-construction survey of the site to establish construction control points, and delineate excavation limits and excavation grid cells. This Bid Item also includes resurveying during excavation as needed to confirm excavation limits and excavation grid cells. Surveying shall be conducted by a State of California Licensed Land Surveyor. The survey shall be conducted using the datum provided on the drawings.

Item B.9 – Site Security (lump sum): The unit price to be paid under this Bid Item shall include all labor, personnel, and equipment, as required to fully secure the site. Provide a temporary solar-powered construction site video security system. The intent of the system is to deter, detect, and respond to persons entering the site for their self-protection, and also for protection of Contractor's equipment. Contractor may also propose a manual security service of similar performance.

BID ITEM GROUP C – EXCAVATION AND DISPOSAL

Bid Item C.1 – Operate and Monitor Environmental Controls (stormwater BMPs, dust control, decontamination station) and H&S Monitoring (lump sum): This Bid Item includes the ongoing monitoring, operation and maintenance of the environmental controls described under Bit Item B.4. Implementation includes full-time Health and Safety supervision, daily safety meetings, preparation and submittal of weekly health and safety reports, and providing appropriate PPE for all construction personnel for the duration of the Project. Implementation of the Health and Safety Program also includes ensuring that all Work is completed in compliance with Section 013529 "Health and Safety Requirements". Any cost related to training Contractor's personnel to meet the Health and Safety training requirements for this Project shall be borne by Contractor.

Bid Item C.2 – Excavate 2 to 6 feet and Load Soil (bank cubic yards): Excavate 2 to 6 ft deep as shown on the Drawings: This Bid Item shall be measured by bank cubic yard. This Bid Item includes all labor, equipment, materials, and tools required to fully excavate, stockpile and load soil associated with the Site excavation and remove utilities that have been confirmed inactive as required to complete construction and as set forth on the Drawings, Section 011400 "Work Restrictions", Section 026100 "Removal and Disposal of Contaminated Soils", Section 311413 "Stockpile Management", Section 312300 "Earthwork", Section 017419 "Construction Waste Management and Disposal", and as directed by the Engineer. NOTE: the Engineer will collect and analyze excavation samples for the determination of achievement of remediation goals. At a minimum, soil will be excavated to the limits shown on the Drawings. Contractor shall allow 5-days for the receipt of sampling results and Engineer's decision on whether additional excavation is required, or whether the excavation is ready for backfill.

Bid Item C.3 – Transportation and Disposal of RCRA-Hazardous Soil (tons): This Bid Item shall be measured by the ton of RCRA-hazardous Soil transported and disposed. Bid Item activities shall be conducted in accordance with requirements set forth in Section 026100 "Removal and Disposal of Contaminated Soils", and Section 017419 "Construction Waste Management and Disposal", and the Contractors approved Work Plans. Contractor is responsible for characterizing excavated soils and for coordinating requirements with Contractor's approved disposal facility. Refer to the Summary of Work in this Section for remedial removal goals.

Bid Item C.4 – Transportation and Disposal of California-Hazardous Soil (tons): This Bid Item shall be measured by the ton of Cal-hazardous Soil transported and disposed. Bid Item activities shall be conducted in accordance with requirements set forth in Section 026100 "Removal and Disposal of Contaminated Soils", and Section 017419 "Construction Waste Management and Disposal", and the Contractors approved Work Plans. Contractor is responsible for characterizing excavated soils and for coordinating requirements with Contractor's approved disposal facility. Refer to the Summary of Work in this Section for remedial removal goals.

Bid Item C.5 – Transportation and Disposal of Non-Hazardous Soil (tons): Bid Item shall be measured by the ton of Non-Hazardous transported and disposed. Non-Hazardous soil is defined as soil above with concentrations of lead and/or BaP above the remedial removal goals but not classified as hazardous. Bid Item activities shall be conducted in accordance with requirements set forth in Section 026100 "Removal and Disposal of Contaminated Soils", and Section 017419 "Construction Waste Management and Disposal", and the Contractors approved Work Plans. Contractor is responsible for characterizing excavated soils and for coordinating requirements with Contractor's approved disposal facility. Refer to the Summary of Work in this Section for remedial removal goals.

BID ITEM GROUP D – SITE RESTORATION

Bid Item D.1 – Provide, Backfill, and Compact Import Fill – (bank cubic yards): This Bid Item shall be measured by cubic yard of accepted import fill material delivered, backfilled, and compacted to meet specifications. This Bid Item includes all labor, equipment, materials, and tools required to fully furnish, test import fill, backfill, compact, and test the compacted backfill material as set forth in Section 312300 "Earthwork".

Bid Item D.2 – Temporary Gravel Surfacing – 3-inch thick – (square feet): Provide, spread, and roll crushed gravel surfacing. Gravel shall be AASHTO #57 Crushed Stone, or similar and approved.

Bid Item D.3 – Demobilize from Site (lump sum): This Bid Item also includes removal of all personnel, equipment, excess materials, and Final Cleaning per Section 017700 "Closeout Procedures". This item includes the preparation of a final set of drawings showing the limits of excavated soil, and the final graded site, both to be stamped by a licensed land surveyor.

PART 2 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 14 00

WORK RESTRICTIONS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes a general description of Work Restrictions to be followed while conducting specified Work activities.

B. Related Sections include the following:

1. Section 013529 “Health and Safety Requirements”
2. Section 015719 “Temporary Environmental Controls”.

1.2 CONTRACTOR’S LIMIT’S OF WORK

A. Contractor shall confine all operations, including the storage of materials to Owner’s property.

B. Contractor’s use of the Site shall be limited to the Work being performed as shown on the Drawings and as addressed in these Specifications.

C. Contractor shall be responsible for the security and safety of Contractor’s and its Subcontractors’ equipment, facilities, and work areas. Owner and Engineer shall not be liable for loss or damage of Contractor’s or its Subcontractors’ tools, vehicles, equipment, or materials, whatever the cause.

D. Contractor shall protect and be responsible for any damage to roadways (in excess of normal wear), facilities, trees, or structures on the Site or adjoining public property caused by its employees or Subcontractors. Any damage caused by Contractor shall be repaired to match previous condition at Contractor’s expense.

1.3 SITE ACCESS

A. The work is located within the Owner’s property. Contractor shall abide by all City of Bell Gardens control requirements when accessing the site.

B. Contractor shall maintain access to the work area in a manner that allows all types of site and delivery vehicles to safely enter and exit the work area.

C. Contractor shall keep driveways, entrances, and truck access locations clear and available as needed including for emergency vehicles at all times. Contractor shall not use these areas for parking, laydown or storage of materials.

D. Contractor shall provide flag persons and signage as necessary and as required by the local, county or state authority for impeded traffic flow on public streets and/or for street closures required to conduct the Work.

E. Contractor shall coordinate and manage traffic control for Contractor's activities consistent with the City of Bell Gardens traffic control requirements.

F. Contractor shall schedule equipment and material deliveries with Engineer to minimize Site access conflicts, roadway conflicts and to minimize space and time requirements for storage of materials and equipment onsite.

G. Contractor shall at all times provide for unimpeded access for emergency vehicles to the Site and nearby properties.

1.4 PARKING

A. Contractor shall not park vehicles in any locations where they impede access to the Site, traffic or access to areas where Work is being conducted.

B. Contractor shall not park vehicles in any adjacent private parking lots of surrounding commercial and financial businesses, nor residential properties.

1.5 WORK HOURS

A. Contractor shall maintain normal Work Hours in accordance with City of Bell Gardens Municipal Code between the hours of 7:00 am. and 4:30 pm. or as otherwise approved in advance by the Engineer, and subject to availability of adequate daylight to safely perform the Work.

B. Contractor shall conduct all Work between sunrise and sunset when there is adequate light so that the Work can be conducted safely and Engineer can effectively observe the Work. Contractor shall provide adequate lighting at all times as deemed necessary by Engineer for safety reasons. If allowed to work past sunset or before sunrise, Contractor shall provide a written plan that provides for safety measures to ensure the safe and supervised travel of Contractor Personnel to and from the Site.

C. Any variation from Normal Work Hours or Work on Saturdays and Sundays, or holidays shall be subject to prior approval of the City of Bell Gardens and Engineer. Contractor shall submit notice to Engineer no less than two (2) working days prior to requesting any necessary variation from Normal Work Hours, to allow for adequate review and coordination of staff. Contractor's notice to Engineer shall include Work activities to be conducted outside of Normal Work Hours, the hours and days that those activities will be conducted, and the requested duration of the change in Work Hours.

D. Work shall not proceed without presence of Engineer, who will be onsite during agreed work hours.

1.6 IDENTIFICATION AND PROTECTION OF EXISTING ACTIVE UTILITIES

A. Utility Identification (lines and vaults):

1. Contractor shall conduct utility identification prior to beginning Work that might come into contact with those utilities (including pipelines, cable conduits, power poles, utility vaults, and other structures).

B. Contractor shall perform all invasive Work within 28 days following the utility locate. If intrusion work has not begun within 28 days following utility locate, Contractor shall renew the Underground Service Alert (USA) ticket.

C. Contractor shall retain an independent utility locator service to locate all utilities within the Limits of Work and within 10 days of initiating Work.

D. Contractor shall protect all encountered utilities from damage during construction activities. If damaged, utility repair shall be the responsibility of Contractor and shall be conducted by Contractor or by another utility contractor if deemed appropriate by Engineer.

E. If a utility is encountered that was not identified by the utility locate or otherwise made known to Contractor prior to beginning the Work, Contractor shall promptly take necessary steps to assure that the utility is not damaged, and provide written notice to Engineer. Engineer will review the conditions and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence of the utility.

F. Contractor shall maintain the following minimum clearances for overhead power lines.

Normal Voltage (phase to phase)	Minimum Required Clearance (feet)
more than 750 – 50,000	10
more than 50,000 - 75,000	11
more than 75,000 - 125,000	13
more than 125,000 - 175,000	15
more than 250,000 - 379,000	21
more than 370,000 - 550,000	27
more than 550,000 - 1,000,000	42

G. Interruption of Existing Utilities: Contractor shall not interrupt any utilities, unless permitted under the following conditions and then only after arranging to provide temporary utility according to requirements indicated:

1. Contractor shall notify Engineer no fewer than five (5) days in advance of proposed interruption of utility.
2. Contractor shall not proceed with interruption of utility without Engineer's written permission.
3. Contractor shall not interrupt any utility without prior written approval from the utility owner. When it is necessary to disconnect a utility, Contractor shall give the utility owner not less than 72 hours notice when requesting written approval.

4. Contractor shall plan utility service shutdowns to be accomplished during period of minimum use. In some cases this may require night or weekend work, in accordance with Section 1.5. Contractor shall perform such work at no additional cost. Contractor shall program work so that service will be restored in the minimum possible time, and shall cooperate with the utility companies in reducing shutdowns of utility systems to a minimum.

H. For all subsurface work:

1. Contractor shall pothole to confirm horizontal and vertical location of all utilities at minimum of three locations adjacent to planned excavation prior to proceeding with other subsurface work. Contractor shall coordinate with utility owner for requirements when locating utility; utility owner may require a Qualified Observer to be present during potholing.

2. Contractor shall determine appropriate utility protection measures with the utility owner and Engineer.

1.7 DECOMMISSION ABANDONED UTILITIES

A. General: Contractor shall confirm that abandoned utilities indicated in areas of excavation are inactive and decommissioned prior to excavation and/or installation of remediation excavation support and protection. Contractor shall manage and contain all contents of pipe during pipe removal.

B. Decommissioning shall consist of the following:

1. Contractor shall confirm abandoned pipelines and conduits with utility owners, when possible. Contractor shall decommission utilities in accordance with utility owner's requirements.

2. A Qualified Observer may be required to be present during decommissioning of abandoned pipelines.

3. For all pipelines and conduits, even if believed to be abandoned, Contractor shall regard the pipelines and/or conduits as active until pipeline/conduit contents are visually confirmed and abandoned status is confirmed with utility owner. Contractor shall expose abandoned pipelines/conduits and confirm contents and status by one of the following:

   a. Observed holes in pipeline/conduit.
   b. Observed termination of pipeline/conduit.
   c. Tap the pipeline. Taps shall be installed by trained and experienced professional who regularly installs hot taps. Taps shall be designed for contents and pressure that may be present in the pipeline and shall include an isolation valve to confirm pipeline contents. Contractor shall comply with all utility owner tapping requirements.
   d. Test status of conductors (if found) using non-contact voltage testers.

4. Contractor shall cut and remove abandoned pipelines and/or conduit and conductors within excavation extents.

5. Contractor shall plug abandoned pipes and/or conduit that extend beyond the limits of excavation. Plugs shall be of slurry grout and a minimum of 6-inches thick. When casting plugs, Contractor shall provide a biodegradable backing to prevent concrete grout from entering the pipe.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 35 29

HEALTH AND SAFETY REQUIREMENTS

PART 1 - GENERAL

1.1 DESCRIPTION

A. This Section applies to all Work at the Site. All Work shall be performed in accordance with the requirements of the State of California, OSHA, and other applicable Federal Laws and Regulations.

B. This Section specifies the minimum health and safety and emergency response requirements for all work to be conducted at the Site, including the development and implementation of a site-specific Health and Safety Plan (HASP) by the Contractor. The HASP shall address all activities performed within the Contract including, but not limited to, clearing, earthwork, excavation support, fencing, and handling, stockpiling, and loading of construction and potentially hazardous materials.

C. WSP has prepared a HASP in accordance with Title 8 of the California Code of Regulations, Section 5192. The HASP does not cover construction activities such as excavation. Contractor and/or its subcontractors must prepare their own HASPs specific to the Work at the Site. Such HASPs must meet the requirements of WSP's HASP at a minimum and must cover all construction activities to be performed by Contractor or subcontractors' personnel. No work shall be performed until the HASP has met the approval of the CITY and/or Lead Agency.

1.2 RELATED SECTIONS

A. Section 011400—Work Restrictions

B. Section 015000—Temporary Facilities and Controls

C. Section 015719—Temporary Environmental Controls

1.3 SUBMITTALS

A. The schedule, required number, and format of each submittal are specified in Section 013300 "Submittal Procedures." Work shall not begin until Engineer reviews and accepts Contractor's submittals listed below.

1. Name, qualifications and Work experience of the Project Health and Safety Officer and Site Health and Safety Officer as specified in Article 1.5 of this Section.
2. Contractor's HASP as specified in Article 1.5.
3. Documentation of Contractor employee and subcontractor training, medical monitoring and fit test records as required by this Section.
4. Contractor's Job Safety Analyses (JSAs) as specified in Article 1.5.

B. A completed copy of a HASP sign-off sheet stating that all workers involved in on-site activities have read and understand the HASP and agree to abide by the plan requirements, have been notified of the possible health risks at the Site, and that they have been appropriately instructed and trained in health and safety procedures as detailed in Contractor's HASP.

C. HASP implementation logs and reports as required in Article 3.2 below.

D. Copies of any incident reporting investigation forms completed during the Project as required in this Section.

1.4 REGULATORY REQUIREMENTS AND APPLICABLE PUBLICATIONS

A. The site-specific HASP and all Work conducted on Site shall be consistent with the requirements of the following references, at minimum:

1. Occupational Safety and Health Administration Standards and Regulations contained in Title 29, Code of Federal Regulations, Parts 1910 and 1926 (29 CFR 1910 and 1926), including amendments as stated in Federal Register March 6, 1989: 9294-9336 (Final Rule, 29 CFR 1910.120 "Hazardous Waste Operations and Emergency Response").
2. United States Environmental Protection Agency (EPA) Standard Operating Guidelines, Revised November 1984.
3. National Institute of Occupational Safety and Health (NIOSH)/OSHA/United States Coast Guard (USCG)/EPA Occupational Safety and Health Guidance Manual for Hazardous Site Activities, October 1985, Department of Health and Human Services (DHHS) NIOSH Publication Number 85-115.
4. Applicable State of California Health and Safety Regulations including, but not limited to the Construction Safety Orders contained in California Code of Regulations Title 8; and hazardous waste site operations in Title 8, Sections 5192 and 5196.

1.5 RESPONSIBILITY OF CONTRACTOR

A. Contractor shall be solely responsible for the health and safety of Contractor's employees and subcontractors. Nothing contained in this section shall relieve Contractor of those responsibilities. Contractor shall notify Owner and Engineer of any site-specific health and safety requirements that must be used at the Site.

B. Contractor shall develop a HASP to address all Work. Existing site reports and documents can be provided to Contractor for information, if requested.

1. The HASP shall include, but not necessarily be limited to, the following sections:

a. Project Overview
b. Project Personnel
c. Site Description and History
d. Scope of Work, Hazard Assessment
e. Site Access and Control
f. Personal Protective Equipment
g. General Safe Work Practices

h. Personnel and Equipment Decontamination
i. Excavation Safety
j. Working Near Utilities
k. Working at Heights
l. Confined Space
m. Hoisting and Lifting
n. Medical Monitoring and Training
o. Emergency Response
p. HASP Amendment procedures.

2. Additionally, the HASP shall address the following requirements:

a. Fitness for Duty
b. Site Safety Inspections
c. Vehicle and Equipment Safety
d. Utility Clearance and Safety including electrical hazards
e. Hazard Reporting Process
f. Stop Work Protocols
g. Site Housekeeping
h. Evacuation Procedures

3. Contractor shall be responsible for its workers' and subcontractors' health and safety. Therefore, Engineer will not approve the HASP but only review it to verify that items specified in this Section are addressed.

C. Contractor shall designate a Project Health and Safety Officer (PHSO) who shall develop, implement, administer, and supervise a site-specific HASP and associated procedures in accordance with these specifications. The qualifications of the PHSO shall include:

1. A minimum of five (5) years working experience in the chemical or hazardous waste disposal industry;
2. Demonstrable expertise in the development of personal protective equipment programs for working in potentially toxic materials; and
3. Working knowledge of State and Federal occupational safety and health regulations.
4. The PHSO shall review the available chemical data and site conditions and develop the HASP. It shall be the responsibility of the PHSO to make interpretations and draw conclusions with respect to the conditions at the site and their impact on health and safety of project personnel.

D. Contractor shall designate an individual as the Site Health and Safety Officer (SHSO) who shall assist and represent the PHSO in the continuous daily implementation and enforcement of the HASP. The qualifications of the SHSO shall include:

1. A minimum of two (2) years working experience at hazardous materials or waste sites where Level C personal protective equipment was required;
2. Working knowledge of State and Federal occupational safety and health regulations.
3. Specialized training in personal and respiratory equipment program implementation and in the proper use of air monitoring instruments, and air sampling methods and procedures;

4. Current certification in first aid and cardiopulmonary resuscitation (CPR) by a recognized approved organization such as the American Red Cross; and
5. In addition to 40 Hour OSHA training, annual refresher training, and medical monitoring, the SSHO shall also be Supervisory (29 CFR 1910.120) trained.
6. The SHSO shall be assigned to the site on a full-time basis during the Work and shall report to Contractor and the PHSO in matters pertaining to site safety and health. The SHSO shall be responsible for preparing and maintaining daily health and safety site logs and reports.

E. Current training certificates for all Contractor and subcontractor employees' shall be submitted to Engineer before mobilization to the site. Contractor shall maintain copies of all certifications and H&S records onsite for review.

F. The contractor's waste transportation drivers and technicians shall be certified in CPR and have OSHA 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training. However, drivers who do not leave their cabs, need not to be OSHA 40-hour trained.

G. Contractor's PHSO/SHSO shall conduct an initial survey to determine the appropriate safety procedures and level of worker safety equipment. Contractor's SHSO shall maintain a continuous health and safety monitoring program throughout the performance of the Work. It shall be the SHSO's responsibility to notify Engineer of any deviations from the health and safety monitoring program.

H. It shall be Contractor's responsibility to notify Engineer verbally and in writing as quickly as possible should any unforeseen safety hazard or condition become evident during the performance of the Work. In the interim, Contractor shall take prudent action to establish and maintain safe working conditions and to safeguard workers, on-site personnel, visitors, potential off-site receptors, and the environment in accordance with the established emergency response procedures.

I. Contractor shall complete JSAs for the various tasks associated with Contractor's Work. Each JSA shall detail each step of a job or task, identify existing or potential hazards (including safety, health, environmental, and work quality), and determine the best procedures to follow to perform the job properly.

1. The work must be performed as described by the JSA.

2. JSAs shall be modified in the field using pen and ink edits as Site conditions change.

3. JSAs applicable to the day's work must be reviewed daily during the tailgate safety briefings.

J. Contractor shall possess a current T1 Trench and Excavation Permit issued by the State of California Division of Occupational Safety and Health (Cal/OSHA) and shall complete and submit necessary Activity Notification Form in compliance with Title 8 CCR 341.1(h).

1.6 TRAINING AND MEDICAL MONITORING

A. All Work for this Project that requires contact with hazardous materials (including, but not limited to soil, groundwater, hazardous substances used to perform the Work) shall

be performed by a qualified, Occupational Safety and Health Administration (OSHA) 40-hour HAZWOPER Contractor.

B. Prior to the initiation of Work at the Site, Contractor shall certify that all personnel assigned for the purpose of performing or supervising Work at the Site that requires contact with hazardous materials (including, but not limited to soil, groundwater, hazardous substances used to perform the Work) have received, and new hires will receive prior to being allowed on Site, appropriate safety training and medical monitoring in compliance with 29 CFR 1910.120. The training shall consist of a minimum of forty (40) hours health and safety training, twenty-four (24) hours of "on the job" training, and eight (8) hours refresher training annually thereafter. Annual medical monitoring is also required in compliance with 29 CFR 1910.120. In addition, the supervisory personnel including but not limited to the Site Superintendent, SHSO, and Foremen shall have a minimum of eight (8) hours additional specialized training for managing hazardous waste operations.

C. It shall be Contractor's responsibility to train and provide medical monitoring for their employees. Contractor shall be responsible for ensuring that only personnel having successfully completed the required training and medical monitoring examination are permitted to enter designated areas of the Site where worker protection is required.

1.7 HAZARD COMMUNICATION

A. Contractor must have a written Hazard Communication Program. The SDS sheets for chemicals brought on site by Contractor shall be maintained at the Site and must be made available to Engineer and other affected subcontractors upon request. Contractor shall provide Engineer with copies of SDS sheets prior to shipment. Engineer may limit chemical quantities stored onsite.

B. Contractor shall assign a Certified Lead Supervisor (CLS) pursuant to the California Department of Public Health (CDPH) to have knowledge of Department of Occupational Safety and Health (DOSH) Hazardous Communications (Title 8 CCR 1509, 3203, and 5194). The Lead Supervisor shall a) complete a minimum of 40 hours of training and b) have at least one year of experience as a certified lead worker or two years of experience in lead-related construction or a related filed to be qualified for submitting an application to CDPH to become a CLS (Title 17, CCR, Section 36100 (a) (1)).

1.8 DUST MONITORING

A. Engineer will install air monitoring stations at the perimeter of the work area to conduct monitoring for particulate matter. Perimeter air monitoring will be conducted during work hours on any day when soil is disturbed (HUD Guidelines; Appendix 13.4 and NIOSH 7082). Results of the perimeter air monitoring will be made available to Contractor.

B. Contractor shall conduct work-zone air monitoring in accordance with its HASP. Contractor shall provide all air monitoring data (in Microsoft Excel spreadsheet format) to Engineer by end of business Monday following each Work week.

C. Contractor shall provide and implement a written personal air monitoring program describing acceptable thresholds for upgrading or downgrading engineering practices or PPE requirements. The written program shall meet or exceed the requirements of Title 8 CCR 1532.1.

1.9 PERSONAL PROTECTION

A. Contractor shall provide on-site personnel, when required by the HASP, with the appropriate personal protective equipment (PPE) and clothing and shall ensure that all PPE and clothing is kept clean and well maintained.

B. Minimum PPE to be worn in all areas of the Site includes hard hats, steel-toed work boots, safety glasses, flame retardant safety vest, and standard work clothes (Level D PPE).

C. Contractor must consider the need to apply engineering and/or Work practice controls as a means for protecting personnel in the performance of site-specific tasks. When practicable, engineering controls shall be implemented to reduce and maintain employee exposures to below safe levels for those tasks demonstrating known or suspected hazards. Work practice controls shall next be applied when engineering controls are impractical and shall be incorporated as site-specific standard operating procedures for personnel precautions and routine operations.

D. Contractor shall use additional PPE above the minimum required only when engineering and/or Work practice controls have been deemed impractical or insufficient to protect employees during the Work (HUD Guidelines: Chapter 9 and Title 8 CCR § 1532.1).

E. Contractor shall select PPE based on an evaluation of performance characteristics, site-specific tasks, and known or suspected hazards and shall assemble the PPE into levels of protection (LOP) or ensembles appropriate for the Site.

F. Contractor shall include in the HASP a list of components for each protective ensemble, the LOP selected for each task, the rationale for each task-specific selection, and any contaminant action levels to be followed in LOP decision making.

G. If Contractor's HASP provides for respiratory protection, Contractor shall include a copy of their Respiratory Protection Program as required by 29 CFR 1910.134. Contractor shall provide copies of employee fit test records.

1.10 SITE ACCESS AND CONTROL

A. Contractor's HASP shall include Site access provisions which effectively limit access to active hazardous materials to only those persons in full compliance with the requirements of OSHA 29 CFR 1910.120 and have met the requirements of Owner/Engineer’s Site orientation program. Contractor shall keep a daily Site entry/exit log that will include the following information: personnel visiting the Site; affiliation; date; arrival time; departure time; and purpose of visit.

1. The Exclusion Zone (EZ) shall include and encompass all areas of clearing and grubbing, earthwork, and stockpiling. The level of PPE required in the EZ shall be in accordance with Contractor's HASP as determined by the PHSO and SHSO.

2. The Contamination Reduction Zone (CRZ) shall be located at the interface of the Exclusion and Support Zones. The function of the CRZ is to provide:
    a. An area to decontaminate personnel, equipment, and vehicles prior to entering the Support Zone from the Exclusion Zones.
    b. A physical separation of the Support and Exclusion Zones.
3. The Support Zone shall be located adjacent to the designated Work areas and away from areas designated as contaminated. The Support Zone shall be clearly delineated and shall be secured against active or passive contamination.
    a. No eating, drinking or smoking will be allowed on the Site except for designated areas approved by Engineer.

B. Contractor is responsible for securing the Work area at the end of each shift and ensuring that all Work areas are secured in such a way so as to prevent unauthorized or accidental access to the Work area.

1.11 DECONTAMINATION

A. The HASP shall specify personnel and equipment decontamination procedures to minimize off-site contamination due to construction activities. Contractor shall be responsible for conducting operations at the Site in such a controlled manner as to reduce the possibility of contact with any contaminants present and to prevent the removal of contaminants by personnel or equipment leaving the Site.

B. All personnel performing or supervising Work within designated areas with potential exposure to hazardous chemical vapors, liquids or contaminated solids shall observe and adhere to the personal hygiene-related provisions of the HASP. Workers shall be instructed in strict hygiene practices including hand washing before eating or smoking, on-site decontamination of clothes and segregation of Work clothes from other home laundry. Any personnel found to be disregarding the personal hygiene-related provisions of the HASP shall be barred from the Site.

C. All PPE worn onsite in designated areas shall be decontaminated or properly disposed of at the end of the Work day. The SHSO shall be responsible for ensuring all PPE is decontaminated before being reissued.

D. Contractor's decontamination procedures must provide for adequate containment and removal of any decontamination solutions and spent disposable protective apparel.

E. Perform decontamination which shall include the removal of accumulated dirt and other material from the equipment and vehicles while said equipment and vehicles are physically located in the Support Zone.

F. Decontamination methods shall consist of brushing and/or vacuuming accumulated dirt or other material from equipment and vehicles. If the Site becomes muddy as a result of Contractor’s activities, including dust control activities, or rainfall, use steam clean or high-pressure wash as the decontamination method. If required, use cleaning solutions as needed to thoroughly remove contamination.

    1. Contractor shall construct a bermed and lined decontamination pad for any and all wet decontamination of equipment. Decontamination pad shall be constructed to contain all liquids and sediments generated.

G. Decontaminate the following materials and equipment.

1. Every item of any sort to be used by Contractor at the Site, prior to mobilization to the Site.
2. Each piece of equipment or vehicle that has entered the Work zone or has come into contact with soil on Site.
3. Equipment used throughout excavation and grading activities.

H. Contractor shall provide access to Owner and Engineer to observe each decontaminated transport vehicle prior to the vehicle's departure from the Site, if requested.

1.12 WORKING NEAR HIGH VOLTAGE UTILITIES

A. The HASP shall provide specific guidelines and procedures for working near high voltage utilities. The HASP shall provide a detailed plan for managing workers' and the public's safety while conducting work near high voltage utilities.

B. Contractor shall provide utility safety orientation training for all workers before they are allowed to work near high voltage utilities.

C. Refer to Section 011400 "Work Restrictions" for additional requirements for conducting work near high voltage utilities.

1.13 EMERGENCY PLANNING

A. Contractor's Emergency Response (ER) Plan applies to the discovery of and/or personal injuries related to the discovery of, or contact with, hazardous material(s) that could be detrimental to human health or the environment. The ER Plan shall also apply to work around active and abandoned utilities, construction hazards, and general emergencies. The ER Plan required by this Section does not relieve Contractor from the requirements of OSHA regulations as referenced elsewhere in these Specifications.

1. The ER Plan may be prepared and submitted as part of, or as an appendix to, Contractor's HASP.

B. The site-specific ER Plan shall be submitted to Engineer for review before any Work covered in the specific procedures can be initiated. It is Contractor's responsibility to implement appropriate emergency response actions to protect Contractor's workers' safety. Therefore, Engineer will not approve the ER Plan but only will review it for content. The procedures, complete with all review comments addressed by Contractor, will be binding on Contractor. Contractor shall implement, maintain, and enforce these procedures at the appropriate time prior to and during all phases of the Work.

C. Should an unanticipated incident occur that is considered serious and/or an imminent hazard by Contractor's SHSO or Engineer, Work within the area influenced by the incident will be suspended until the emergency situation has been brought under control, the incident has been evaluated, and Site conditions which contributed to the emergency have been mitigated.

D. An emergency situation or imminent hazard includes, but is not limited to, discovery of the following or similar unanticipated conditions during the execution of the Work:

1. Personal injury, fire, explosion;
2. Spills or leaks of chemicals or petroleum products on Site; and
3. Other perceived threats.

E. Site personnel shall immediately report all incidents to Contractor's SHSO and Engineer. Contractor's SHSO and PHSO will determine the appropriate steps to be taken subject to Engineer's concurrence. All Site incidents will be investigated and documented by Contractor. Specific mitigation and response actions to deal with the emergency are not included within these procedures. However, measures to contain or minimize the impacts of an emergency shall be included.

F. The ER Plan shall include, but not necessary be limited to, the following components as required by OSHA 29 CFR 1910.120(i)(j):

1. Site description and evaluation;
2. Names of key personnel and an alternate responsible for Site safety and health (responsibilities and chain of command);
3. Emergency equipment and first aid requirements;
4. Emergency response plan and contingency procedures.

G. The ER Plan shall address on-site and off-site emergencies as specified in OSHA 29 CFR 1910.120 (q) (1), and shall also address, at a minimum:

1. Pre-emergency planning;
2. Personnel roles, lines of authority, training and communication;
3. Key person at the Site authorized and responsible for implementing the plan;
4. Site communication;
5. Site diagrams showing general layout, Work zones, and prevailing weather conditions;
6. Emergency recognition and control measures;
7. Safe distances and places of refuge;
8. Site security and control;
9. Evacuation routes and procedures, frequency of drills;
10. Emergency decontamination;
11. Emergency medical treatment and first aid;
12. Emergency alerting and response procedures;
13. Critique of response and follow-up; and
14. Personal protective equipment and emergency equipment.

H. In the event of any emergency, Contractor shall without delay take diligent action to remove or otherwise minimize the cause of the emergency; alert Engineer; and institute whatever measures might be necessary to prevent any repetition of the conditions or actions leading to, or resulting in, the emergency.

I. Should the emergency be related to the contact of unanticipated contaminated material, Contractor shall enact emergency response activities or shall evacuate the area until the emergency is otherwise mitigated in compliance with the ER Plan.

J. Emergency medical care services shall be prearranged at a nearby medical facility, including established emergency routes of travel.

K. Contractor shall establish emergency communications with health and emergency services. The name of this facility, name of primary contact, emergency routes, and emergency communications arrangements shall be prominently posted at the Site. The posted list shall include the following points as a minimum:

1. Ambulance service and fire department telephone numbers;
2. Procedure for prompt notification of Engineer and Owner;
3. Location of emergency showers and eye wash facilities (where applicable);
4. Location of self-contained breathing devices (where applicable); and
5. Specific procedures for handling personnel with excessive exposure to chemicals or contaminated soil.

L. All emergency contact names and telephone numbers shall be posted at all project phones.

M. All designated Site emergency vehicles shall be equipped with route maps providing directions to the off-site medical facility. All drivers of support vehicles shall become familiar with the emergency route and the travel time required.

N. In the event that an accident or some other incident, such as an explosion or release to groundwater or the environment, occurs during the course of the Work, Engineer shall be telephoned immediately and receive a written notification within twenty-four (24) hours. Written notification to Engineer shall include, but not be limited to, the following items:

1. Name, organization, telephone number, and location of Contractor;
2. Name and title of the person(s) reporting;
3. Date and time of accident/incident;
4. Location of accident/incident, i.e., Site location, facility name;
5. Identity of individual(s) involved in the accident;
6. Brief summary of accident/incident giving pertinent details including type of operation ongoing at time of accident;
7. Cause of accident or incident, if known;
8. Casualties (fatalities, disabling injuries);
9. Details of any existing chemical hazard or contamination;
10. Estimated property damage, if applicable;
11. Nature of damage; effect on contract schedule;
12. Action taken by Contractor to insure safety and security;

13. Other damage or injuries sustained (public or private); and
14. Root cause analysis.

O. Contractor shall notify Engineer of all person(s) exposed above the PELs at the time of occurrence and follow up in writing within twenty-four (24) hours. This notification shall include, but not be limited to:

1. Date, time and identity of individual(s) involved;
2. Nature of the exposure episode;
3. What the individual(s) were exposed to;
4. Personal protective equipment worn during exposure; and
5. Steps taken to prevent a reoccurrence.

P. Procedures and Contractor personnel responsibilities for potential emergencies shall be identified in the ER Plan. Emphasis in the contingency planning section shall be placed on procedures.

Q. Emergency response procedures shall include employee training, alarm systems, escape routes and procedures, critical operations or equipment, rescue and medical duty assignments, designation of responsible parties, emergency reporting procedures, and methods to account for all employees after evacuation.

R. In the event that on-site Work results in the accidental spill or release of oil or hazardous materials, containment to the extent possible will be required by on-site personnel (in proper PPE as designated by the SSHO). Containment should include the use of absorbent pads or materials, covering and/or diverting spills from sewers, drains, surface water bodies, etc. For spills that cannot be controlled by on-site personnel, or are above the reportable quantities, the SSHO or designee will secure the area and make the required notifications.

1. Coordinate spill prevention containment and counter measures with the requirements set forth in Related Sections.

1.14 EMERGENCY RESPONSE EQUIPMENT, SUPPLIES AND FIRST AID REQUIREMENTS

A. Contractor shall provide a 20A-80 BC type dry chemical fire extinguisher at each active work area, at Contractor’s field office or Support Zone, and any other Site location where flammable or combustible material may present a fire risk.

B. At least one "industrial" first aid kit shall be provided and maintained, fully stocked at an easily accessible, uncontaminated, manned location.

C. The first aid station shall be specially marked and provided with adequate water and other supplies necessary to cleanse and decontaminate burns, wounds or lesions.

D. At least one (1) fifteen (15) minute eyewash station.

E. Other emergency response equipment as required by contractors and/or operators.

1.15 INCIDENT REPORTING PROCEDURES

A. Contractor shall notify Engineer of all injuries, accidents and illnesses occurring as a result of or during on-site Work. Notification to Engineer must be made verbally at the time of the occurrence and in writing within twenty-four (24) hours. The notification shall include, but not be limited to, the date, time, identity of individual(s) involved in the incident, the nature of the incident, the actions taken to treat the victim and the steps taken to prevent reoccurrence.

B. Contractor is responsible for notification to OSHA, if necessary, and after notifying Engineer and Owner.

1.16 CALIFORNIA PROPOSITION 65 NOTICE

Contractor is hereby notified that chemicals known to the State of California to cause cancer and birth defects may be present at the Site. Contractor shall notify employees and Subcontractors working at the Site of this notice; and this notice shall be contained in the HASP.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Contractor shall provide on-site personnel, when required by the HASP, with the appropriate PPE and clothing and shall ensure that all PPE and clothing is kept clean and well maintained.

B. All health and safety materials and equipment shall conform, at a minimum, to OSHA, NIOSH and American National Standards Institute (ANSI) standards and requirements.

PART 3 - EXECUTION

3.1 IMPLEMENTATION AND GENERAL REQUIREMENTS

A. The HASP shall be implemented by Contractor under the direction of the PHSO. It is Contractor’s responsibility to ensure compliance with the HASP. Modifications to Contractor’s HASP proposed by the PHSO shall be made after review by Engineer.

B. Engineer may conduct quality assurance inspections and may request access to Contractor’s site-specific health and safety records.

C. Prior to the commencement of on-site activities, a Site Safety Meeting and Orientation will be held to review the specific requirements of the HASP. Daily Safety Meetings (tailgate meetings) and Weekly Safety Meetings will be conducted by the SHSO throughout the duration of on-site activities. All attendees of Daily and Weekly Safety Meetings shall sign an attendance form for inclusion in Contractor’s Daily Safety Log. In addition, the SHSO will ensure that site visitors have had the required training in accordance with 29 CFR 1910.120 and will provide pre-entry safety briefings.

D. Daily safety meetings (tailgate meetings) shall provide an awareness of planned operations, the form and warning properties of potential hazards, Work zones, locations of emergency/safety equipment, local emergency response procedures, Site characteristics, level of protection, communications, decontamination procedures and emergency facilities and signals.

3.2 LOGS, REPORTS AND RECORDKEEPING

A. Contractor shall maintain daily logs and reports covering the implementation of the HASP. The format shall be developed by Contractor to include daily logs and weekly reports. Contractor shall provide Engineer with copies of all logs and reports on a weekly basis.

B. Daily Safety Logs shall include at a minimum, the following:

1. Date;
2. Area (site specific) inspected;
3. Employees in a particular area and the Work being performed;
4. Site visitors, name, affiliation and purpose of Site visit;
5. Equipment being utilized by employees;
6. Protective clothing being worn by employees;
7. Protective equipment being utilized by Contractor's personnel, visitors, and designated State and Federal representatives;
8. Daily and Weekly Safety Meeting notes and attendance forms; and
9. SHSO signature and date.

C. Contractor shall be solely responsible for compliance with all Federal laws such as 29 CFR 1910.20 which require personnel exposure records and medical records be maintained by employer for a specified length of time after the termination of the job.

END OF SECTION

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes requirements for temporary utilities, temporary construction fencing, support facilities, sanitation, and security and protection facilities.

1.2 RELATED SECTIONS

A. Section 013529—Health and Safety Requirements

B. Section 015719—Temporary Environmental Controls

C. Section 017000—Execution

D. Section 017419—Construction Waste Management and Disposal

E. Section 017700—Closeout Procedures

1.3 USE CHARGES

A. Cost or use charges for temporary facilities shall be included in the Contract Sum (as defined in Section 013100). Contractor shall allow other entities limited use of Contractor's temporary services and facilities without cost, including, but not limited to: Engineer and its agents, Owner and its agents, testing agencies, and authorities having jurisdiction.

1.4 SUBMITTALS

A. Contractor shall show temporary facilities, staging areas, and parking areas for construction personnel on Site Plan. Contractor shall submit Site Plan to Engineer prior to mobilization.

PART 2 - PRODUCTS

2.1 TEMPORARY FACILITIES

A. Field Offices, General: Contractor shall provide temporary office space with electrical service in support of construction activities. Temporary power service will need to be arranged by Contractor with Southern California Edison. The provided office space shall include a furnished, dedicated, office space separate from the Contractor's space, for the use by Engineer and its agents and/or Owner and its agents.

B. Storage and Fabrication Sheds: Contractor shall supply locking sheds, trailers, or other containers sized, furnished, and equipped to accommodate materials and equipment for Contractor's construction operations, as needed. Storage facilities shall be provided at Contractor's sole discretion for the storage and protection of Contractor's materials, supplies, and equipment.

2.2 EQUIPMENT

A. Fire Extinguishers: Contractor shall have fire extinguishers onsite during Work as required by Section 01 35 29 Health and Safety.

2.3 TEMPORARY CONSTRUCTION FENCING

A. If specified on the Drawings, Contractor shall provide temporary chain link fencing adequate to secure the entire construction area, where indicated on the Drawings, or otherwise required to secure the Site.

B. Contractor shall provide temporary chain link fence as follows:

1. Unless otherwise indicated, type of temporary chain link fencing shall be a minimum of 6 feet high adequately secured and lockable. The following types are acceptable:

    a. New materials or previously used salvaged chain link fencing in good condition.

    b. Posts: Galvanized steel pipe of diameter to provide rigidity. Post shall be suitable for setting in concrete footings, driving into ground, anchoring with base plates, or inserting in precast concrete blocks.

    c. Fabric: Woven galvanized steel wire, 2" mesh 9 gauge at a minimum provided in continuous lengths to be wire tied to fence posts or prefabricated into modular pipe-framed fence panels.

    d. Privacy Screen: New, recyclable, green, knitted polyethylene, 90% visibility blockage, grommets all 4 sides at 24-inch maximum spacing, material break strength 500 lbs per square foot minimum.

    e. Gates: Personnel and vehicle gates of the quantity and size indicated on the Drawings or required for functional access to the Site.

        1) Fabricate of same material as used for fencing.

        2) Vehicle gates:

            a) Minimum width: 20 feet to allow access for emergency vehicles.

            b) Capable of manual operation by one person.

C. Contractor shall provide temporary plastic mesh fencing as needed, as follows:

1. Plastic mesh fencing set in precast concrete blocks where required to provide visual warning and control.

2. Height: 36 inches minimum.

3. Color: Safety orange or other as approved by Engineer.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Contractor shall locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Contractor shall relocate and modify facilities as required by progress of the Work, and as required to coordinate with other work at the Site. Contractor shall coordinate facility locations with Engineer and Owner.

B. Contractor shall provide each facility ready for use when needed to avoid delay. Contractor shall not remove facilities until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

A. General: Contractor shall install temporary service or provide temporary utilities to support Contractor's work.

B. Water Service: Contractor shall provide adequate drinking water for use by construction personnel. Contractor shall provide water and facility to store water in support of all construction operations. City water service may be available on site. Transportation and storage of needed water shall be Contractor's responsibility.

C. Sanitary Facilities: Contractor shall provide shared temporary toilets and hand wash facilities with a capacity to service the full work crew including all Contractor, subcontractor, and Engineer's personnel. Contractor shall provide at least one separate toilet unit, exclusively for use by the female gender. At a minimum, Contractor shall provide sufficient sanitation facilities as needed for personnel onsite.

D. Heating, Cooling, and Ventilation: Contractor shall provide temporary heating, cooling, and ventilation if required by construction activities for curing or drying of completed installations or if required for the protection of installed construction from adverse effects of low temperatures or high humidity. Contractor shall select equipment that will not have a harmful effect on completed installations or elements being installed. Contractor shall coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.

E. Electric Power Service: Contractor shall provide on-site electrical service (e.g. temporary power drop from AMP) to support all power needs for completion of its work and that of its subcontractors.

F. Telephone Service: Contractor shall provide adequate mobile phone communications for all supervisory personnel at the Site for the duration of the Project.

3.3 SUPPORT FACILITIES INSTALLATION

A. Traffic Controls: Contractor shall comply with requirements of authorities having jurisdiction and requirements of related sections.

1. Contractor shall protect existing Site improvements to remain.
2. Contractor shall maintain access for emergency vehicles.

B. Project Identification and Temporary Signs: Contractor shall provide project identification and other signs. Unauthorized signs are not permitted.

1. Contractor shall provide temporary, directional signs for construction personnel and visitors.
2. Contractor shall maintain and touch up signs so they are legible at all times.

C. Waste Disposal Facilities: Contractor shall provide waste-collection containers approved by the United States DOT in sizes adequate to handle waste from construction operations, dispose of accumulated waste as required, and comply with requirements of authorities having jurisdiction.

3.4 TEMPORARY FENCING INSTALLATION AND MAINTENANCE

A. Layout:

1. Installation of temporary fencing shall not deter or hinder access to existing and new hose connections and fire hydrants.
    a. Contractor shall maintain adequate clear space around fire hydrants as required by local ordinance or a minimum of 3 feet, whichever is greater.
    b. Where fire hydrant or hose connection is blocked by fencing, Contractor shall provide access gate.
2. Access: Contractor shall provide gates for personnel, delivery of materials, and access by emergency vehicles.
3. Contractor shall field verify location with Engineer.

B. Installation:

1. Contractor shall install chain link posts as follows:
    a. Space at 10 foot maximum.
    b. Drive posts, set in holes and backfill, or anchor in precast concrete blocks.
    c. For soft and unstable ground conditions, cast concrete plug around post.
2. Posts over pavement: Contractor shall use steel post plates or precast concrete blocks.
3. Gate posts: Contractor shall use bracing or concrete footings to provide rigidity for accommodating size of gate.
4. Fabric: Contractor shall securely attach to posts.

5. Privacy Screen: Contractor shall securely attach to fabric with manufacturer's attachment ties or galvanized hog rings.

6. Gates: Contractor shall install with required hardware.

7. Plastic mesh fencing: Contractor shall space steel support posts to ensure mesh remains vertical and at proper height and securely tie mesh to posts.

C. Maintenance and Removal

1. Contractor shall maintain fencing in good condition. If damaged, Contractor shall immediately repair.
2. Contractor shall remove temporary fencing upon completion of Work or when no longer required for security or control. Contractor shall backfill holes and compact. Holes in pavement shall be surfaced to match existing paving. Contractor shall repair damage caused by installation of temporary fencing.

3.5 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. General Security: Contractor is wholly responsible for security of the Site and for prevention of unauthorized access. Contractor will not be compensated for theft of materials or equipment from the Site.

B. Contractor may choose to contract for security patrol outside of normal working hours. Security company shall be state-licensed and to have a Better Business Bureau rating of 'A' or better.

C. Environmental Protection: Contractor shall provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

D. Security Enclosure and Lockup: Contractor shall provide lockable entrances to storage areas and to areas enclosed with temporary fencing to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Contractor shall be responsible for any vandalism to temporary facilities.

E. Barricades, Warning Signs, and Lights: Contractor shall comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

F. Temporary Enclosures: Contractor shall provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Contractor shall be responsible to protect all completed Work until final acceptance has been received from Engineer and formally documented.

G. Temporary Fire Protection: Contractor shall install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.

1. Contractor shall prohibit smoking in construction areas and field offices. Smoking is only allowed outside of the Site boundary.

2. Contractor shall supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
3. Contractor shall develop and supervise an overall fire-prevention and protection program for personnel at the Site. Contractor shall review needs with local fire department, establish procedures to be followed, instruct personnel in methods and procedures, and post warnings and information.

3.6 OPERATION, TERMINATION, AND REMOVAL

A. Supervision: Contractor shall enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.

B. Maintenance: Contractor shall maintain facilities in good operating condition until removal.

C. Temporary Facility Changeover: Contractor shall not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion (as defined in Section 01 77 00).

D. Termination and Removal: Contractor shall remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Contractor shall complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are property of Contractor.
2. At Substantial Completion, Contractor shall clean and renovate permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 01 77 00 "Closeout Procedures."

END OF SECTION

SECTION 01 57 19

TEMPORARY ENVIRONMENTAL CONTROLS

PART 1 - GENERAL

1.1 SCOPE

A. Work under this Section includes Contractor implementation of temporary environmental controls associated with storm water protection, dust control, hazardous materials management, and spill prevention and response. At a minimum, Contractor shall comply with the following permit and plans:

1. National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ, NPDES No. CAS000002 (Construction General Permit) issued by the California State Water Resources Control Board.
2. Transportation Plan (Section 015719)
3. Dust Control and Monitoring Plan (DCMP) (Section 015719)
4. Storm Water Pollution Prevention Plan (SWPPP) (Section 015719)
5. Site-Specific Health and Safety Plan (HASP) (Section 013529)
6. Decontamination Plan (Sections 013529, 015719, and 017419)
7. Soil Management Plan (Sections 015719, 017419, 026100, and 312300)

B. Contractor shall perform work area air monitoring. Perimeter air monitoring will be by the Engineer.

1.2 RELATED SECTIONS

A. Section 011400—Work Restrictions

B. Section 013529—Health and Safety Requirements

C. Section 015000—Temporary Facilities and Controls

D. Section 017419—Construction Waste Management and Disposal

E. Section 026100—Removal and Disposal of Contaminated Soils

1.3 DEFINITIONS

A. Storm Water Pollution Controls: Structural and non-structural measures provided by Contractor before, during, and after a rainfall event to minimize rainfall runoff from the Site, prevent on-site sediment from being carried offsite, and limit pollutant loading to rainfall runoff.

B. Hazardous Material: Any material, either solid, liquid or gas, that is deemed harmful to human health and/or the environment as defined by Title 49 Code of Federal Regulations (CFR) Parts 171-180.

C. Hazardous Waste: Any waste material, either solid, liquid or gas, that is deemed harmful to human health and/or the environment as defined by Title 40 CFR Parts 261.3.

D. Dust: Airborne particulates that are associated with or result from Contractor's activities.

1.4 SUBMITTALS

A. Before any work is conducted at the Site, Contractor shall submit to Engineer for review and approval, a detailed Construction Work Plan that includes descriptions of Contractor's approach, methods, and equipment to be used to reduce potential impacts to the Site, adjacent property, the public, and the environment in the following areas:

1. Hazardous materials
2. Emissions control
3. Erosion and sediment control
4. Spill prevention and control measures
5. Transportation and traffic

PART 2 - PRODUCTS N/A

PART 3 - EXECUTION

3.1 HAZARDOUS MATERIALS AND HAZARDOUS WASTE CONTROLS DURING SITE WORK

A. Contractor shall provide controls to effectively and safely manage hazardous materials and hazardous waste during Site Work. Contractor shall store hazardous materials and hazardous waste in appropriate containers within secondary containment, as appropriate. Contractor shall use storage sheds, containers, or lockers, as appropriate. Contractor shall apply all appropriate signage and warnings for hazardous materials and hazardous waste storage.

B. Contractor shall inform Engineer prior to bringing petroleum and/or hazardous materials to the Site. Contractor shall provide an inventory list of hazardous materials, their intended use, and brief description of proposed storage practices. Contractor shall furnish Safety Data Sheets (SDS) for all hazardous materials it plans to bring to the Site or use on Site. Contractor shall be fully responsible in complying with all applicable local, state, and federal regulations for the handling, storage, and management of the petroleum and/or hazardous materials, if brought to the Site for the Work.

C. Upon completion of Work, Contractor shall remove from the Site all petroleum products and/or hazardous materials brought to the Site.

3.2 STORM WATER POLLUTION PREVENTION

A. The Engineer has provided a SWPPP, prepared by a Qualified SWPPP Developer (QSD). Associated installed stormwater controls shall be subject to regular inspection by a Qualified SWPPP Practitioner, as required by the SWPPP.

B. Contractor shall provide controls to prevent storm water runoff from exposed soil on the Site and prevent sediment from leaving the Site.

C. Contractor shall comply with the SWPPP prepared by the Engineer, and the requirements included in the Construction General Permit. The SWPPP describes a program of best management practices (BMP) installation, maintenance, and monitoring that will be implemented to prevent unauthorized storm water discharges and to minimize or prevent construction-related sediments and pollutants from entering receiving waters during construction activities.

D. Contractor shall provide controls so that storm water does not accumulate in excavations, pits, or trenches constructed during the Work. Contractor shall be responsible for the removal, treatment (if required), and proper disposal of any rainwater that accumulates in excavations, pits, or trenches prior to the pits being backfilled.

E. If Engineer observes conditions that are not in compliance with state of California laws and regulations or BMPs, Engineer will notify Contractor. Contractor shall provide a remedy immediately.

3.3 EMMISSIONS CONTROL

A. Chemicals of potential concern that could be mobilized to the air as vapor, odor, or particulates (dust) during execution of the Work are described in the Dust Control and Monitoring Plan (DCMP, Appendix E of the RAW). The Contractor is responsible for incorporating the information included in the DCMP into its own DCMP and will be wholly responsible for the implementation thereof.

B. Contractor shall implement careful sequencing of the Work, all necessary engineering controls, and active management to prevent emissions of dust, vapors, and odor exceeding action levels specified in the Dust Control Plan. The fugitive dust control and monitoring procedures described in the DCMP prepared by Engineer are consistent with the requirements of South Coast Air Quality Management District (SCAQMD) Rule 403– Fugitive Dust and Rule 1466 – Control of Particulate Emissions from Soils with Toxic Air Contaminants (hereafter collectively referred to as the Rules).Although contractor will likely have a SCAQMD Rule 1166 Various Locations Permit, it is not anticipated that these excavation activities will be subject to SCAQMD Rule 1166 due to the nonvolatile nature of the impacted soil.

C. Contractor shall assign a Dust Control Supervisor (DCS) certified by the SCAQMD to employ dust control measures to ensure compliance with all applicable Rules (403 and 1466).

D. Contractor shall:

1. Prevent the generation of dust from on-site activities exceeding the work-zone action levels specified in the HASP.
2. Prevent the dispersal and off-site migration of vapors and odors generated by on-site activities that exceed the site-perimeter action levels specified in the Dust Control Plan.

E. Contractor shall be responsible for selecting and implementing appropriate and effective methods for emissions control.

F. Shall designate a Certified Lead Supervisor (CLS) pursuant to California Department of Public Health (CDPH) requirements (Section 6.5) to observe and enforce sufficient fugitive dust suppression and mitigation measures. The Lead Supervisor shall a) complete a minimum of 40 hours of training and b) have at least one year of experience as a certified lead worker or two years of experience in lead-related construction or a related filed to be qualified for submitting an application to CDPH to become a CLS (Title 17, CCR, Section 36100 (a)(1)).

G. The CLS should be able to select the appropriate respiratory protection based on air monitoring results (United States Department of Housing and Urban Development (HUD) Guidelines: Chapter 9 and Title 8 CCR § 1532.1) and implement the requirements for minimum and maximum employee air monitoring sampling volumes (HUD Guidelines; Appendix 13.4 and NIOH 7082).

H. CDPH and EPA regulatory standards for testing and sampling for lead in soil (Title 17 CCR § 35033, 35035, and 35036) as well as the regulations governing the abatement of lead-contaminated soil (HUD Guidelines: Chapter 12, and Title 17 CCR § 36000 and 36100) shall be understood and followed as needed.

I. The CLS should have knowledge of the CDPH Title 17 requirements (40 CFR, Part 745 and 24 CFR, Part 35, et al.) to apply mitigation measures.

J. Contractor shall use real-time monitoring instruments preapproved by the SCAQMD Executive Office so that conditions can be modified to be protective of onsite workers and to minimize potential offsite movement of dust, as warranted.

K. Dust, Vapor, and Odor Control: If emission levels exceed action levels, Contractor shall stop work activity immediately to implement additional measures. Contractor shall not resume Work until Contractor can demonstrate to Engineer that emission levels have been effectively controlled to below action levels. Except as required by Engineer, Contractor shall not employ dust control methods which result in ponded water, or surface erosion.

L. Management/Communication of Air Quality Monitoring Results: Contractor shall refer to the DCMP for procedures to be followed for communicating and acting upon the results of air quality monitoring performed by the Contractor.

M. Contractor’s Responsibility for Control of Emissions: Effective control of dust, vapor, and odor is of paramount importance for protection of workers on the Site, for protection of the public, and for compliance with Laws and Regulations. During the performance of all Work, Contractor shall employ conscientious and effective means of emissions control. Contractor shall assume responsibility for all damages, delays,

government-imposed penalties or fines, and claims which result from Contractor's negligent emissions control practices.

N. No claims may be made for delays, no extension of contract time will be available, and no additional compensation will be paid due to the Contractor’s failure to meet dust control requirements.

O. Contractor shall minimize the amount of time that ambient air is exposed to odorous materials at Site by covering excavated soil and stockpiles with polyethylene sheeting/tarps.

P. Inspect stabilized or covered stockpiles daily. For a stabilized stockpile, such inspections shall include a demonstration of stabilization by one or more of the applicable test methods contained in SCAQMD Rule 403.

Q. Contractor shall spray vapor suppressant foam to stockpiles or excavation that may emit vapors if undisturbed for 1 hour.

R. If primary mitigation measures are not sufficient and work zone vapor action level exceedances persist, secondary mitigation measures shall be employed by applying vapor and odor suppression products on all exposed soil within the excavation, soil directly loaded into trucks, and/or temporary stockpiles of soil.

3.4 DECONTAMINATION

A. Institute protocols for decontaminating equipment that encounters impacted site media and approaches for checking cleanliness of equipment are described in the Decontamination Plan (Appendix D of RAW).

B. Decontamination will be conducted in a separately constructed decontamination area suitable for the size of the equipment to be decontaminated and using materials appropriate for the collection of any site-related liquids, or other regulated materials and the decontamination materials.

3.5 TRANSPORTATION AND TRAFFIC

A. Contractor shall transport materials in compliance with all applicable local, state, and federal regulations, and in ways to prevent impacts to human health and safety and the environment, and minimize impacts to local traffic, businesses, and residents near the site and along designated haul routes.

B. Contractor shall be responsible for preparing a TP in accordance with the DTSC Interim Final Guidance for Developing Transportation Plans for Removal or Remedial Actions dated December 5, 2001 (DTSC, 2001b, the City of Bell Gardens permitting requirements and the Manual of Traffic Control Devices (MUTCD) standards and shall obtain all necessary permits from the City.

C. Contractor shall assist Engineer to perform vehicle inspection of all trucks prior to hauling wastes from the Site to off-site disposal or recycling facilities. At Contractor’s expense, Contractor shall provide alternate truck(s) for the Work to replace any truck(s) rejected by Engineer.

D. Contractor shall be responsible for ensuring that all drivers meet the United States Department of Transportation (DOT) requirements of DOT 8-Hour HM-181, 215G, and 232, Training for Hazardous Materials Transportation, DOT Security Awareness Training for Hazardous Materials.

3.6 NOISE

A. Contractor shall comply with all applicable requirements by the City of Bell Gardens related to construction noise.

B. Contractor shall comply with all applicable local, state, and federal regulations to protect on-site workers from excessive noise, including but not limited to, the Occupational Safety and Health Agency (OSHA) 1910.95(c)(1) regulation requiring noise level not to exceed an 8-hour time weighted average (TWA) of 85 dBA. Contractor shall implement mitigation measures if noise levels exceed a TWA of 85 dBA.

END OF SECTION

SECTION 01 70 00

EXECUTION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:

1. Construction layout.
2. Field engineering and surveying.
3. General installation of products.
4. Progress cleaning.
5. Protection of installed construction.
6. Correction of the Work.

1.2 RELATED SECTIONS

A. Section 017419—Construction Waste Management and Disposal

B. Section 312300—Earthwork

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Existing Conditions: The existence and location of Site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, Contractor shall investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work, at minimum:

1. Contractor shall verify the location and points of connection of utility services.

B. Acceptance of Conditions: Contractor shall examine areas and conditions for compliance with requirements for installation tolerances and other conditions affecting performance, and record observations, at minimum:

1. Contractor shall examine grades and site conditions before construction.
2. Contractor shall proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Field Measurements: Contractor shall take field measurements as required to fit the Work properly. Contractor shall recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, Contractor shall verify dimensions of other construction by field measurements before fabrication. Contractor shall coordinate fabrication schedule with construction progress to avoid delaying the Work.

B. Space Requirements: Contractor shall verify space requirements and dimensions of items shown diagrammatically on Drawings.

C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, Contractor shall submit a Request For Information to Engineer. Contractor shall include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

3.3 CONSTRUCTION LAYOUT

A. Property Lines: Prior to construction, Contractor shall retain a licensed survey crew to lay out and stake the property boundary. Contractor shall protect staking and construct improvements relative to property line as shown on the drawings.

B. Verification: Before proceeding to lay out the Work, Contractor shall verify layout information shown on Drawings. If discrepancies are discovered, Contractor shall notify Engineer promptly.

C. General: Contractor shall lay out the Work using accepted surveying practices including:

1. Contractor shall establish benchmarks, and control points to set lines and levels as needed to locate each element of the Project.
2. Contractor shall establish dimensions within tolerances indicated. Contractor shall not scale Drawings to obtain required dimensions.
3. Contractor shall inform installers of lines and levels to which they must comply.
4. Contractor shall check the location, level and plumb, of every major element as the Work progresses.
5. Contractor shall notify Engineer when deviations from required lines and levels exceed allowable tolerances.
6. Contractor shall close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.

D. Site Improvements: Contractor shall locate and lay out Site improvements, including pavements, slopes, grading, fill, utility slopes, and invert elevations.

E. Record Log: Contractor shall maintain a log of layout control work. Contractor shall record deviations from required lines and levels; include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used; and make the log available for reference by Engineer.

3.4 SURVEYING AND FIELD ENGINEERING

A. Identification: Existing benchmarks and control points are identified in the Drawings.

B. Reference Points: Contractor shall locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Contractor shall preserve and protect permanent benchmarks and control points during construction operations.

1. Contractor shall not change or relocate existing benchmarks or control points without prior written approval of Engineer. Contractor shall report lost or destroyed permanent benchmarks or control points promptly and report the need to relocate permanent benchmarks or control points to Engineer before proceeding.
2. Contractor shall replace lost or destroyed permanent benchmarks and control points promptly and base replacements on the original survey control points.

C. Benchmarks: Contractor shall establish and maintain a minimum of two permanent benchmarks on Project Site, referenced to data established by survey control points. Contractor shall comply with authorities having jurisdiction for type and size of benchmark.

1. Contractor shall record benchmark locations, with horizontal and vertical data, on Project Record Documents.
2. Where the actual location or elevation of layout points cannot be marked, Contractor shall provide temporary reference points sufficient to locate the Work.
3. Contractor shall remove temporary reference points when no longer needed and restore marked construction to its original condition.

D. For survey requirements related to excavation support systems, Contractor shall refer to Related Sections.

3.5 INSTALLATION

A. General: Contractor shall locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated:

1. Contractor shall make vertical work plumb and make horizontal work level.
2. Where space is limited, Contractor shall install components to maximize space available for maintenance and ease of removal for replacement.

B. Contractor shall comply with manufacturer's written instructions and recommendations for installing products in applications indicated.

C. Contractor shall install products at the time and under conditions that will ensure the best possible results. Contractor shall maintain conditions required for product performance until Substantial Completion (as defined in Section 017700).

D. Contractor shall conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

E. Tools and Equipment: Contractor shall use tools and equipment that are specifically designed for the task and that can complete the task in a safe manner. Contractor shall not use tools or equipment that produce harmful noise levels.

F. Hazardous Materials: Contractor shall use products, cleaners, and installation materials that are not considered hazardous, where possible.

3.6 PROGRESS CLEANING

A. General: Contractor shall clean Project Site and Work areas daily, including common areas. Contractor shall coordinate progress cleaning for joint-use areas where more than one installer has worked. Contractor shall enforce requirements strictly and dispose of materials lawfully.

1. Contractor shall comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
2. Contractor shall containerize hazardous and unsanitary waste materials separately from other waste and mark containers appropriately and dispose of legally, according to regulations. Refer to Related Sections.

B. Site: Contractor shall maintain Project Site free of waste materials and debris.

C. Work Areas: Contractor shall clean areas where Work is in progress to the level of cleanliness necessary for proper execution of the Work.

1. Contractor shall remove liquid spills promptly.
2. Where dust would impair proper execution of the Work, Contractor shall broom-clean or vacuum the entire Work area, as appropriate.

D. Site and Street Sweeping: Contractor shall perform Site and street cleaning at the end of each week and additionally as needed.

1. Contractor shall take measures to minimize dust during sweeping activities.

E. Installed Work: Contractor shall keep installed Work clean. Contractor shall clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, Contractor shall use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

F. Exposed Surfaces in Finished Areas: Contractor shall clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

G. Waste Disposal: Contractor shall not bury or burn waste materials onsite or wash waste materials into waterways. Refer to Related Sections.

H. During handling and installation, Contractor shall clean and protect construction in progress and adjoining materials already in place. Contractor shall apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

I. Contractor shall clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Contractor shall adjust and lubricate operable components to ensure operability without damaging effects.

J. Limiting Exposures: Contractor shall supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.7 PROTECTION OF INSTALLED CONSTRUCTION

A. Contractor shall provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

3.8 CORRECTION OF THE WORK

A. Contractor shall repair or remove and replace defective construction. Contractor shall restore damaged finishes.

1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.

B. Contractor shall restore permanent facilities used during construction to their specified condition.

C. Contractor shall remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.

D. Contractor shall repair components that do not operate properly. Contractor shall remove and replace operating components that cannot be repaired.

END OF SECTION

SECTION 01 74 19

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for the management and disposal of hazardous and non-hazardous wastes generated during the Work, including earthwork and soil management.

B. Articles of potential cultural resource significance encountered at the Site are not wastes and are the property of Owner.

C. Related Sections include the following:

1. Section 011400—Work Restrictions
2. Section 013300—Submittal Procedures
3. Section 013529—Health and Safety Requirements
4. Section 015719—Temporary Environmental Controls.
5. Section 026100—Removal and Disposal of Contaminated Soils
6. Section 312000—Earthwork

D. Related Documents include the following:

1. WSP, Draft Removal Action Work Plan, Former Berk Oil and Pacific Metal Craft, May 2023.

E. Hazardous and non-hazardous wastes:

1. Non-hazardous project wastes shall be disposed of at an appropriate waste disposal facility.
2. Excavated soil and contact water shall remain the property of Owner.
3. Project wastes in contact with site soil that needs to be handled as hazardous waste shall remain the property of Owner.
4. Non-hazardous wastes shall be segregated and recycled by Contractor when possible and feasible.
5. Hazardous wastes shall be handled and managed by Contractor in accordance with California Code of Regulations, Title 22, Sections 66260.210 and 66250, and all applicable federal, state, and local regulations.
6. All waste containers shall be approved by the United States Department of Transportation (DOT) for subsequent characterization and offsite disposal in accordance with all applicable federal, state, and local regulations.
7. Contractor shall be responsible for making all arrangements with approved disposal facilities for acceptance and profiling of all non-hazardous and hazardous wastes generated during Project. Laboratory analyses in addition to

those described in Paragraph 3.3 of this Section may be required by the receiving facility.

8. Contractor shall submit the proposed disposal and/or recycling facilities information for review and approval by Owner and Engineer a minimum of five (5) business days prior to off-site transportation of any project wastes.

F. Wastes requiring management include:

1. General construction waste. These materials are anticipated to be generated from construction activities and may include trash, packaging materials, and other non-hazardous solid wastes that are not recyclable, not reusable, or have no salvage value. Contractor shall not mix any general construction waste with soil from the Site. General construction waste shall become the property of the Contractor. General construction waste will not require management as a hazardous waste. When recyclable, general construction waste shall be segregated and recycled.

2. Concrete and asphalt concrete debris may be generated from areas of the Site as described below:

   a. Surface concrete, asphalt concrete, and debris not in direct contact with soil (anticipated to be in paved roadway and sidewalk areas): Where these materials are only in direct contact with the aggregate base placed on top of site soil, Contractor shall not excavate the aggregate base to the extent practicable when removing the concrete and asphalt concrete. The concrete or asphalt concrete debris is non-hazardous project waste and shall be recycled to the extent possible. Contractor shall expose aggregate base under pavements and obtain approval from Engineer that pavement debris will not require management as a hazardous waste.

   b. Surface or subsurface concrete, and asphalt concrete with no visual indication of environmental impact and/or in direct contact with soil that does not need to be managed as hazardous waste: Contractor shall obtain determination from Engineer/Owner whether these materials can be managed as a non-hazardous waste and/or recycled.

   c. Surface or subsurface concrete and asphalt concrete with visual indication of environmental impact and/or in direct contact with soil that needs to be handled as hazardous waste: Engineer/Owner and/or disposal facility may require testing of these materials for waste profiling. Contractor shall obtain determination from Engineer/Owner whether these materials are required to be managed by Contractor as hazardous wastes.

3. Construction debris may include the following:

   a. Abandoned metallic piping free of soil: When the interior of the removed pipe sections is empty and free of soil and other unknown material, soil adhering to the pipe exterior shall be removed by brushing or other effective means. These pipe sections are non-hazardous project waste and shall be recycled to the extent possible.

   b. Abandoned metallic piping containing soil: Pipe segments are non-hazardous project waste if containing soil that does not need to be handled as hazardous waste. Pipe segments containing soil that needs to be

handled as hazardous waste shall be managed by Contractor as hazardous waste. Upon exposing, removing, and evaluating the condition of pipe sections, Contractor shall obtain approval from Engineer for the disposition of individual pipe sections removed.

c. Abandoned metallic piping containing unknown material: The unknown material shall be characterized and profiled as described in Paragraph 3.3 of this Section. Upon exposing, removing, and evaluating the condition of pipe sections, Contractor shall provide Engineer with test data and obtain approval from Engineer for the disposition of individual pipe sections removed. Pipe segments containing unknown material that does not need to be handled as hazardous waste are non-hazardous project waste. Pipe segments containing unknown material that needs to be handled as hazardous waste shall be managed by Contractor as hazardous waste.

d. Asbestos-containing material and debris: If encountered in the excavations, asbestos pipe, pipe wrap and/or other material and debris containing asbestos shall be managed by Contractor in accordance with all applicable federal and state regulations. If encountered, Contractor shall have a person with required training handle the asbestos-containing material and debris and test for friable asbestos. Contractor shall provide Engineer with test data and obtain approval from Engineer prior to disposal of the asbestos-containing material and debris.

e. Fencing materials not in contact with soil: Removed fencing materials not in contact with site soil, such as fence fabric and posts, are non-hazardous project waste.

f. Fencing materials in contact with soil: Fencing materials such as concrete post foundations are non-hazardous project waste if in contact with soil that does not need to be handled as hazardous waste. Such materials may be properly cleaned and recycled. Contractor shall be responsible for any testing required in order to document sufficient cleaning in support of recycling.

g. Miscellaneous Debris: Miscellaneous debris generated during excavation activities may include non-metallic pipes, wood, bricks, etc. These materials are non-hazardous project waste if in contact with soil that does not need to be handled as hazardous waste. Miscellaneous debris in contact with soil that needs to be handled as hazardous waste shall be managed by Contractor as hazardous waste.

4. Other miscellaneous wastes, including but not limited to spray paint cans, batteries, etc., are the property of Contractor. Contractor shall store, manage, and dispose of these wastes in accordance with all applicable federal, state, and local regulations.

G. Contractor shall be responsible for removal and disposal of all wastes generated at the Site in association with the Work at the end of the Work. Contractor shall make all reasonable efforts to minimize generation of any wastes.

H. Contractor shall be responsible for obtaining and paying for all permits, licenses, and fees that may be required for waste management and disposal.

I. Burning of any waste is not allowed.

1.2 SUBMITTALS

A. Identification of Waste Transportation Subcontractors: Contractor shall obtain and submit to Engineer letters of commitment from waste transporters agreeing to handle the wastes generated from the Work and shall attach the following information for each waste transportation company. Contractor shall submit this information at least 14 calendar days prior to generation of wastes for Engineer approval:

1. Name and EPA identification number.
2. A copy of the company's Department of Transportation license.
3. Address and telephone number.
4. Name and telephone number of responsible contact.
5. List of types and sizes of all transport vehicles and equipment to be used.
6. A description of proposed transportation methods, schedules and procedures for hauling waste material, including type of vehicles that will be used for each class of waste and frequency of transport.
7. Any and all necessary permit authorizations for each class of waste transported.

B. Waste Profile Forms: Contractor shall submit prepared waste profile forms to Engineer. Engineer will facilitate review and approval by Owner. Contractor shall also provide copies of the final waste profile documentation approved by the waste disposal facility.

C. Waste Manifests/Bills of Lading: Contractor shall prepare a manifest for each load of hazardous waste and Bill of Lading for each non-hazardous waste stream.

D. Final Waste Manifest/Bills of Lading Records: Contractor shall submit completed waste manifest records within two (2) business days after notification of receipt at the disposal facility. Owner reserves the right to withhold payment for waste disposal for which the final waste manifest/bills of lading are not received.

E. Disposal Log: Contractor shall create and maintain a log for tracking disposal information for all wastes removed from the Site. Contractor's Disposal Log shall be updated and submitted to Engineer every 7 calendar days. The Disposal Log shall be in tabular format and include the following information for each load of material disposed:

1. Waste manifest number and/or Bill of Lading number.
2. Name and individual truck IDs of waste hauling company.
3. Type of waste-hauling truck.
4. Date and time truck passed third-party vehicle inspection.

5. Date transported from the Site.
6. Source of the waste (e.g., location).
7. Date received at disposal facility.
8. Waste type (e.g. soil, asphalt concrete, etc.).
9. Approximate volume of waste loaded in each truck.
10. Load weight as measured at the disposal facility.
11. Date of load disposal at disposal facility.
12. Name of disposal facility.

F. Waste Container Log: Contractor shall create and maintain a log for tracking the information for all containers (e.g., buckets, bins, drums, tanks) of wastes generated from the project and stored at the Site. Contractor's Waste Container Log shall be updated and submitted to Engineer every 7 calendar days. The Waste Container Log shall be in tabular format and include the following information for each container:

1. Container ID number.
2. Content of container.
3. First date of waste generation.
4. Source of the waste (e.g., location, operations/process).
5. Approximate volume of waste in container.
6. Date container transported from the Site.
7. Date container received at the disposal facility.
8. Name of disposal facility.

G. Disposal Facility Weight Records: Contractor shall submit to Engineer copies of all weight records obtained from the disposal facilities. Contractor shall submit the weight record every 7 calendar days, attached to the Disposal Log described in Paragraph 1.2 E of this Section.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 GENERAL

A. Contractor shall provide handling, containers, storage, signage, transportation, and other items as required to implement the Transportation Plan (within the RAW) for the duration of the Contract.

B. Contractor shall only use the transporter(s) identified in Contractor's approved submittals for the performance of Work. Any use of substitute or additional transporters must have prior written approval by Engineer or Owner. Contractor shall be responsible for any additional costs that may be incurred for utilizing alternate transportation.

3.2 LABELING OF CONTAINERS OF WASTES STORED ON SITE

A. Contractor shall label all containers of wastes stored on site in accordance with all applicable federal, state, and local regulatory requirements.

3.3 WASTE CHARACTERIZATION AND PROFILING

A. Unknown material or contact water: Contractor shall collect a representative sample of each material and submit to a State-certified laboratory, using chain-of-custody procedures, for the following chemical analyses for waste characterization and profiling:

1. Total petroleum hydrocarbons quantified as diesel and motor oil (U.S. Environmental Protection Agency [EPA] Method 8015M),
2. Volatile organic compounds and total petroleum hydrocarbons quantified as gasoline (EPA Method 8260B),
3. Polycyclic aromatic hydrocarbons using EPA Method 8270 SIM,
4. CCR Title 22 metals (EPA Methods 6010B/7471A),

B. Contractor shall request additional chemical analyses from its contracted laboratory if required by the approved disposal or recycling facilities. STLC and TCLP analyses may be used to determine hazardous waste characterization as outlined in CCR Title 22 and federal guidelines.

C. Waste profiling will be conducted in accordance with the requirements of the approved soil disposal facility. Information regarding the number of samples and laboratory analyses required will be provided by the disposal facility.

D. The excavation contractor will be responsible for ensuring that samples for waste profiling are collected and analyzed as per the requirements of the disposal facility.

E. Contractor shall designate a Certified Lead Supervisor (CLS) pursuant to California Department of Public Health (CDPH) requirements (Section 6.5). The CLS shall understand how to characterize, store, and dispose of hazardous waste. In particular, the CLS shall understand the waste characterization procedures and how to interpret the test results (HUD Guidelines: Chapter 10 and Title 22 CCR). The Lead Supervisor shall a) complete a minimum of 40 hours of training and b) have at least one year of experience as a certified lead worker or two years of experience in lead-related construction or a related filed to be qualified for submitting an application to CDPH to become a CLS (Title 17, CCR, Section 36100 (a) (1)).

F. Contractor will prepare a TP to include waste characteristics, waste classification, and destination of soil to be transported offsite. TP shall be prepared in accordance with the DTSC Interim Final Guidance for Developing Transportation Plans for Removal or Remedial Actions dated December 5, 2001, for approval by the city and/or Lead Agency.

G. Contractor shall prepare SMP to state that waste profile sampling will be conducted as detailed in the QA/QC Plan (or following city-approved modifications if appropriate).

3.4 MATERIAL SEGREGATION

A. Materials shall be segregated for stockpiling based on the source of the material (as described in Paragraph 1.1 in this Section).

B. Contractor shall establish and maintain separate storage bins for different categories of material and maintain segregation of the materials in the separate storage bins, as needed.

3.5 MATERIAL PLACEMENT AND STORAGE BIN MAINTENANCE (APPLICABLE WHEN BINS ARE IN USE)

A. Contractor shall inspect all empty bins delivered to the Site prior to receiving and unloading empty bins to ensure that all empty bins are free of soil or other materials, are in good working condition without holes or cracks, and that all covers and doors on bins function and seal satisfactorily.

B. Contractor shall maintain storage bins until the stored material is transported offsite. Contractor shall ensure that all bins containing wastes do not leak while onsite or during transport. Contractor shall not dispose of any materials from a storage bin without prior approval from Engineer.

C. Contractor shall place all materials in storage bins in accordance with the requirements of local, State, and Federal regulations.

D. Contractor shall cover all storage bins containing material at the end of each work shift to prevent material disturbance.

E. Contractor shall implement odor control measures if odor is noticeable from the materials stored in any bin.

3.6 SECONDARY CONTAINMENT

A. Contractor shall store contact water in enclosed sealed drums or tanks with appropriate secondary containment approved by Engineer.

3.7 MANIFEST PROCEDURES

A. Contractor shall utilize a state-approved manifest system so that wastes can be tracked from generation to ultimate disposal. The manifests must comply with all the provisions of the transportation and disposal regulations. Contractor shall provide a draft manifest to Engineer at beginning of Work for Owner’s approval. Once approved, subsequent manifests will be sequentially numbered. Contractor shall be responsible for preparing and obtaining Owner’s signature on manifests for each load.

B. Contractor shall be responsible for accurate and timely completion of final manifests. All transporters must sign the appropriate portions of the manifest and must comply with all of the provisions established in state and federal DOT regulations. The disposal facility must sign the appropriate portions of the manifest and return it to Contractor the day of disposal. Engineer reserves the right to withhold payment for waste disposal for which final manifests are not received.

3.8 SPILL PREVENTION

A. Contractor shall utilize appropriate vehicles and operating practices to prevent spillage or leakage of materials from occurring onsite or en-route.

3.9 CONTAMINATION PREVENTION

A. Trucks shall be securely covered prior to leaving the Site. All truck bed covers shall be in good condition without rips, tears, or holes and shall fully cover the entire truck bed area, and trucks loaded with wastes from the site shall not leak while onsite and during transport to off-site disposal facilities.

B. Contractor shall be responsible for thorough transport vehicle decontamination before the transport vehicles leave the Site. All vehicles leaving work areas shall be inspected by the Contractor's Construction Quality Assurance Engineer to ensure that no waste or soil adheres to its wheels, fenders, ledges, or undercarriage. Contractor shall remove any such material at the Work area or the decontamination area before the truck is allowed to leave the Site per the Decontamination Plan (Appendix D of the RAW).

C. Contractor shall regularly inspect offsite roadways along the designated routes that the vehicles take from the Site to ensure that no leakage or tracking of mud or soil has occurred. If such materials resulting from leakage or tracking are observed along the designated roadways, Contractor shall immediately clean the area at Contractor's expense and modify procedures as necessary to prevent recurrence.

D. Contractor shall be responsible for any and all actions necessary to remedy situations involving materials spilled in transit or mud, soil and dust tracked offsite. This cleanup shall be accomplished at Contractor's expense.

3.10 EMISSIONS CONTROL

A. Vapors and odors may be generated from the excavated soil placed in stockpiles and/or trucks for off-site transportation. All requirements of the Dust Control And Monitoring Plan (Appendix E of the RAW) apply to the Work described in this Section.

3.11 DELIVERY SCHEDULE

A. Contractor shall coordinate the schedule for truck arrival at the Site and at the disposal facility to meet the approved project schedule. The schedule shall be compatible with waste stockpiling space limitations and the availability of equipment and personnel for material handling operations. Contractor shall identify proposed truck staging areas in Contractor's Work Plan for review and approval by Engineer and Owner.

3.12 COMBINATION OF WASTES

A. Contractor shall not combine materials from other projects with materials from the Site.

B. Contractor shall not mix hazardous waste with non-hazardous waste from the Site.

3.13 SITE ACCESS AND TEMPORARY CONTROLS

A. Contractor shall conduct waste management operations to ensure minimum interference with roads, walkways, and other adjacent occupied and used facilities.

3.14 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged or otherwise reused, Contractor shall remove waste materials from the Site and legally dispose of them at an approved disposal or recycling facility acceptable to authorities having jurisdiction.

3.15 MANAGEMENT OF SATURATED SOIL

A. If necessary, Contractor shall remove free liquids from excavated soil by pumping, mixing with dry soil, adding cement, or other Engineer-approved method required to remove free liquids and stabilize excavated soil to facilitate off-site transportation and disposal in accordance with applicable federal and local regulations and in accordance with the requirements of the disposal facility.

END OF SECTION

SECTION 01 77 00

CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:

1. Inspection procedures.
2. Warranties.
3. Final cleaning.

B. Related Sections include the following:

1. Section 017000—Execution
2. Section 017419—Construction Waste Management and Disposal

1.2 SUBSTANTIAL COMPLETION

A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, Contractor shall complete the following items and note items that are incomplete in request.

1. Contractor shall prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
2. Contractor shall submit specific warranties, maintenance service agreements, final certifications, and similar documents.
3. Contractor shall prepare and submit Project Record Documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
4. Contractor shall submit all field test reports.
5. Contractor shall submit manifests for all wastes disposed.
6. Contractor shall complete final cleaning requirements.
7. Contractor shall touch up and otherwise repair and restore marred exposed finishes and sealants to eliminate visual defects.

B. Inspection: Contractor shall submit a written request for inspection to Engineer for Substantial Completion. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Engineer, that must be completed or corrected before certificate will be issued.

1. Re-inspection: Contractor shall request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.

2. Results of completed inspection will form the basis of requirements for Final Completion.

1.3 FINAL COMPLETION

A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, Contractor shall complete the following:

1. Contractor shall submit a final Application for Payment according to Agreement between Contractor and Engineer.
2. Contractor shall submit certified copy of Engineer's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Engineer. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
3. Contractor shall submit evidence of final, continuing insurance coverage complying with insurance requirements as applicable per the Contract Conditions.
4. Contractor shall instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems as applicable per the Specifications.

B. Inspection: Contractor shall submit a written request to Engineer for final inspection for acceptance. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Re-inspection: Contractor shall request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.4 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Preparation: Contractor shall submit three copies of list. Contractor shall include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction. Use CSI Form 14.1A or other form approved by Engineer**.**

1. Contractor shall organize list of areas in sequential order.

2. Contractor shall organize items applying to each area by major element.

1.5 WARRANTIES

A. All warranties shall be in accordance with the Agreement between Contractor and Engineer.

B. Submittal Time: Contractor shall submit written warranties at the request of the Engineer for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.

C. Contractor shall organize warranty documents into an orderly sequence based on the table of contents of the Contract Documents.

D. Contractor shall provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Cleaning Agents: Contractor shall use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Contractor shall not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 FINAL CLEANING

A. General: Contractor shall provide final cleaning. Contractor shall conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Contractor shall complete the following cleaning operations before requesting inspection for certification of Substantial Completion for the entire Site or for a portion of the Site:

1. Contractor shall clean Site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
2. Contractor shall sweep paved areas clean. Contractor shall remove petrochemical spills, stains, and other foreign deposits.
3. Contractor shall rake grounds that are neither planted nor paved to a smooth, even-textured surface.
4. Contractor shall remove tools, construction equipment, machinery, and surplus material from Site.
5. Contractor shall clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Contractor shall avoid disturbing natural weathering of exterior surfaces. Contractor shall restore reflective surfaces to their original condition.
6. Contractor shall remove labels that are not permanent and restore all signs and placards to their original location including signs/placards on the fence.
7. Contractor shall touch up and otherwise repair and restore marred, exposed finishes and surfaces. Contractor shall replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
    a. Contractor shall not paint over "UL" and similar labels, including mechanical and electrical nameplates.
8. Contractor shall leave Site clean and ready for occupancy.

C. Contractor shall comply with safety standards for cleaning. Contractor shall not burn waste materials. Contractor shall not bury debris or excess materials on Owner's property. Contractor shall not discharge volatile, harmful, or dangerous materials into

drainage systems. Contractor shall remove waste materials from Site and dispose of lawfully.

D. Pressure Washing. Contractor shall remove all debris and pressure wash existing sidewalk, curbs and gutters in all areas where the Work occurred or were otherwise occupied by the Contractor.

END OF SECTION

SECTION 01 78 39

PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:

1. Record Drawings.
2. Record Specifications.
3. Record Product Data.
4. Miscellaneous Record Data.

B. Refer to each individual Specification for specific requirements for Project Record Documents of the Work in those Sections.

1.2 SUBMITTALS

A. Record Drawings: Contractor shall submit two sets of marked-up Record Prints.

B. Contractor shall provide all Record Submittals to Engineer before final demobilization.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

A. Record Prints: Contractor shall maintain one set of blue- or black-line white prints of the Contract Drawings and Shop Drawings. Contractor shall:

1. Preparation: Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, Subcontractor, or similar entity, to prepare the marked-up Record Prints.
    a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
    b. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
2. Mark the Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If Shop Drawings are marked, show cross-reference on the Contract Drawings.
3. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
4. Mark Record Prints to show actual locations of underground utilities in and around the work area, including active utilities, cut and capped utilities, and new or replaced utilities.

5. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

B. Format: Contractor shall identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.

1. Record Prints: Contractor shall organize Record Prints and newly prepared Record Drawings into manageable sets, bind each set with durable paper cover sheets and include identification on cover sheets as follows:

a. Project name.

b. Date.

c. Designation "PROJECT RECORD DRAWINGS."

d. Name of Owner.

e. Name of Contractor.

2.2 MISCELLANEOUS RECORD SUBMITTALS

A. Contractor shall assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Contractor shall bind or file miscellaneous records and identify each, ready for continued use and reference.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

A. Recording: Contractor shall maintain one copy of each submittal during the construction period for Project Record Document purposes. Contractor shall update project records and submit to the Engineer any modifications and changes made as they occur. Contractor should not wait until the end of the Project to submit construction changes.

B. Maintenance of Record Documents and Samples: Contractor shall store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Engineer's reference during normal working hours.

END OF SECTION 017839

SECTION 02 61 00

REMOVAL AND DISPOSAL OF CONTAMINATED SOILS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract Documents, including Removal Action Work Plan (RAW) and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. The Contractor shall furnish all labor, materials, tools, and equipment and perform all operations necessary for the excavation, transportation, and disposal of soil and debris generated through excavation to the limits identified in the Engineering Drawings. Excavated materials will be pre-profiled by the Contractor for disposal at the approved disposal facilities. The Contractor shall be responsible for scheduling and coordinating the off-site transportation of all work-related solid waste for disposal.

B. The Contractor shall be responsible for construction and maintenance of material staging and dewatering areas.

C. Related Sections:

1. Section 011400—Work Restrictions
2. Section 015000—Temporary Facilities and Controls
3. Section 015719—Temporary Environmental Controls
4. Section 017000—Execution
5. Section 017419—Construction Waste Management and Disposal
6. Section 312300—Earthwork

1.3 REFERENCES

A. All standards and codes referred to herein form a part of the requirements of this Technical Specification in the manner and to the extent indicated. The latest edition in effect at the date of the purchase order or contract shall be used. Where local jurisdictional authorities have requirements exceeding or in conflict with this standard, such requirements shall supersede this Technical Specification.

1. Occupational Safety and Health Administration (OSHA) rules and regulations, including Title 29 of the Code of Federal Regulations (CFR) Parts 1910 and 1926, Title 8 California Code of Regulations (CCR) § 5192 and § 1532.1.
2. United States Environmental Protection Agency (USEPA) rules and regulations, including 40 CFR.

3. California Department of Public Health (CDPH) rules and regulations, including Title 17 CCR § 35033, § 35035, and § 35036.
4. United States Department of Transportation (USDOT) rules and regulations, including 49 CFR Parts 171 and 172.
5. National Institute of Occupational Safety and Health (NIOSH) recommendations.
6. Applicable rules and regulations of California and any other states or municipalities receiving waste materials generated during the remedial construction activities.
7. Department of Health Care Services (DHCS) rules and regulations, including Title 22 CCR.

Whenever there is a conflict or overlap of the above-referenced documents, the most stringent provision shall be applicable.

In the event that any requirement of this Section contradicts any such regulatory requirement, the Contractor shall immediately notify the Owner and Engineer of such conflict or contradiction.

1.4 SUBMITTALS

A. Construction Work Plan: Contractor shall submit a Construction Work Plan including excavation plan to the Engineer for review and approval. Excavation plan shall include, at a minimum, description of the means, methods, materials, and equipment for excavation the contaminated soil, an itemized list of components and waste streams, plan for management of spoils stockpiles, and description of proposed decontamination methods.

1.5 PROJECT CONDITIONS

A. Contractor shall not commence excavation activities until temporary erosion, sedimentation, and dust control measures are in place as described in Related Sections.

B. Contractor shall notify Engineer of discrepancies between existing conditions and Drawings before proceeding with excavation.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PREPARATION

A. Contractor shall perform excavation in accordance with Contractor’s accepted HASP.

B. Contractor shall perform a pre-construction site survey to establish property boundaries, construction control points, and delineate excavation limits and excavation grid cells.

C. Contractor shall protect live utilities and decommission abandoned utilities as described in Related Sections.

D. Contractor shall protect existing Site improvements to remain from damage during demolition.

3.2 WASTE CHARACTERIZATION

A. Soil generated from each of the proposed excavation area shall be stockpiled separately onsite, and the contractor will be responsible for waste profiling. Following receipt of analytical results from soil samples submitted for waste profiling and selection of certified disposal facilities, the contractor shall prepare a TP per Sections 017419 and 015719.

B. Excavated soil shall be profiled under three separate waste classifications based on concentration of lead in soil for offsite disposal. These classifications include: Resource Conservation and Recovery Act (RCRA)- hazardous (RCRA-haz), non-RCRA California hazardous (Cal-haz), and non-hazardous (non-haz).

C. Contractor shall prepare all off-site disposal documentation, including waste profile forms, Uniform Hazardous Waste Manifests for hazardous wastes, and Bills of Lading for non-hazardous wastes. Contractor shall provide the documentation to Engineer a minimum of five (5) business days prior to planned off-haul. Contractor shall be responsible for preparing and obtaining Owner's (or the Engineer acting as an authorized agent for the Owner) signature on manifests for each load. Completed waste profiles shall be maintained on site by the Engineer in the project file.

3.3 EXCAVATION

A. Excavation activities shall be conducted using excavation equipment (e.g., excavator, backhoe) and methods determined by the Contractor and described in the Contractor's Construction Work Plan. More information can be found in Section 312300)

B. The Contractor shall excavate soil and debris (e.g., brick, concrete) to the horizontal and vertical limits identified in the Engineering Drawings or as directed by the Engineer.

C. The selected excavation contractor's staff and field personnel will be trained in accordance with 29 CFR 1910.120 and Title 8 California Code of Regulations (CCR) § 5192 for hazardous waste workers and will comply with the requirements of Title 8 CCR § 1532.1 and Appendices.

3.4 STABILIZATION/COVERING OF EXCAVATED MATERIALS

A. The Contractor shall chemically stabilized and/or completely cover the stockpiled soil per the Dust Control and Monitoring Plan (DCMP) at the end of each day and perform daily inspection.

3.5 TEMPORARY STORAGE OF WASTE MATERIALS

A. General

1. Contractor shall securely store waste materials at the Site in appropriately sized covered bins or containers, or stockpile pending transportation for off-site disposal. The waste shall be stored in locations approved by the Engineer so as not to endanger the work and so that easy access may be had at all times to all parts of the work area.

2. Stockpiling of contaminated soil shall be conducted in accordance with the DCMP (Appendix E of the RAW), Section 015719 Temporary Environmental Controls, and Section 017419 Construction Waste Management and Disposal.

3. The Contractor is responsible for providing all materials, equipment, and services required for excavating, loading, storage, stockpiling, transportation of wastes, and stockpiling operations. The Contractor shall adhere to the access restrictions specified in the Engineering Drawings and these Technical Specifications relating to the excavation support structures. The Contractor shall not drive, load, or store any equipment or materials within such restricted areas.

4. Special precautions shall be taken to permit access at all times to fire hydrants, fire alarm boxes, driveways, and other points where access may involve the safety and welfare of the general public.

B. Material Staging Areas

1. Material staging areas shall be constructed as specified in the Contractor's Construction Work Plan.
2. The Contractor is responsible for constructing and maintaining material staging areas to accommodate all loads, vehicles, and equipment.
3. The transfer of materials into and out of material staging areas shall not involve any equipment or procedures that may jeopardize the integrity of the underlying liner, if present.
4. The size and location of the material staging areas shall be included in the Contractor's Construction Work Plan. The Contractor may propose alternative staging area locations, sizes, and numbers. Prior to utilizing alternative staging areas, the Contractor must obtain approval by the Engineer and/or Owner.

3.6 LOADING, TRANSPORTATION, AND DISPOSAL

A. The Contractor shall be responsible for the transportation of waste materials off site for disposal at Owner-selected facilities.

B. The excavation contractor's waste transportation drivers and technicians shall be certified in cardiopulmonary resuscitation (CPR) and have OSHA 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training. All drivers shall meet the United States Department of Transportation (DOT) requirements of DOT 8-Hour HM-181, 215G, and 232, Training for Hazardous Materials Transportation, DOT Security Awareness Training for Hazardous Materials.

C. The Contractor shall load excavated soil into lined dump trucks, or equivalent, for transportation to an appropriate off-site facility for disposal. Based on the results of the waste characterization, the excavated soil deemed appropriate for off-site disposal will be disposed of in a manner consistent with all applicable local, State and Federal

regulations and the requirements of the receiving facilities. Accordingly, the off-site facility identified by the Owner shall be permitted to accept such waste material.

D. Waste materials shall be transported in vehicles with valid (current) Waste Transporter Permits for the State of California and other required permits/licenses from any other states as applicable (based on the final destination of the waste material). Waste Transporter Permits shall be submitted to the Owner/Engineer prior to mobilizing to the Site and copies of those permits shall be maintained on site by the Contactor in the project file. Owner may have pre-negotiated rates with the approved disposal or recycling facilities. Contractor shall coordinate with Engineer and Owner to obtain the rate information from these facilities for this Work, unless Contractor has more cost-effective pre-negotiated rates with the approved disposal or recycling facilities.

E. All vehicles transporting excavated materials off site shall be fully lined with 10-mil polyethylene sheeting, an equivalent material, or otherwise water-tight and equipped with functioning tailgate locks and non-mesh (solid), waterproof tarpaulins that are appropriately secured over the load to prevent material being blown or otherwise dislodged from the transport vehicle.

F. Vehicles shall be loaded in such a manner as to avoid contamination of their exteriors (e.g., loaded with 10-mil polyethylene sheeting draped over the side of the truck).

G. A manifest (hazardous or non-hazardous as appropriate) shall be prepared by the Engineer or Contractor for each load waste material to be transported off site for disposal. Each manifest will be signed by the Owner (as the Generator) or an authorized agent. Counter-signed waste manifests and facility disposal receipts (indicating the actual quantity of waste received at the treatment/disposal facility) shall be provided by Contractor for each load transported and shall be maintained by the Engineer on site in the project file.

H. Apply dust suppressant to material prior to loading.

I. Empty the loader bucket slowly so that no dust plumes are generated.

J. Minimize the drop height from the loader bucket.

K. Maintain at least six inches of space between the soil and the top of the truck bed while transporting within a site.

L. All loads will be covered and secured before leaving the site.

M. The owner or operator shall immediately remove any spilled soil containing applicable toxic air contaminant(s)

N. Prior to leaving the Site, all vehicles shall be inspected by the Engineer and cleaned by Contractor (within a properly constructed decontamination area) of any visible soil or debris per the DCMP. At Contractor’s expense, Contractor shall provide alternate truck(s) for the Work to replace any truck(s) rejected by Engineer.

O. The Contractor shall keep all streets, sidewalks, and pavements clean and free from dirt, mud, stone, and other hauled materials and perform daily inspection per the DCMP.

P. Vehicles transporting waste materials off site for disposal shall follow the approved truck route specified in the RAW.

END OF SECTION

SECTION 31 23 00

EARTHWORK

PART 1 - GENERAL

1.1 DESCRIPTION

A. Perform earth excavation, backfill, and grading as indicated or specified.

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

1.2 SUMMARY

A. This Section includes the following:

1. Concrete pad removal
2. Excavating for soil removal actions.
3. Confirmation sampling.
4. Place, compact, and grade imported backfill.
5. Restoration (or finish surface)

B. Related Sections include the following:

1. Section 011400—Work Restrictions
2. Section 013200—Construction Progress Documentation
3. Section 015000—Temporary Facilities and Controls
4. Section 017419—Construction Waste Management and Disposal
5. Section 015719—Temporary Environmental Controls
6. Section 026100—Removal and Disposal of Contaminated Soils

1.3 REFERENCES AND APPLICABLE STANDARDS

A. Regulatory requirements which govern the work of this Section include, but may not be limited to, the following governing codes:

1. California Code of Regulations, Title 8, Chapter 4, Subchapter 4 — Construction Safety Orders, §1541 — Excavation.
2. California Code of Regulations, Title 8, Chapter 3.2, Regulations of the Division of Occupational Safety and Health, §341 Permit Requirements.
3. OSHA excavation safety standards (29 CFR Part 1926 Subpart P).

B. Excavations, regardless of depth, shall comply fully with the requirements of Sections 3304.1, 3304.1.1, 3304.1.2, 3304.1.3, 3304.1.4 and 3304.1.5 of the California Building Code.

1.4 DEFINITIONS

A. Acceptable Material: Soil material which does not contain organic silt or organic clay, peat, vegetation, wood or roots, stones or rock fragments over three (3) inches in diameter, porous biodegradable matter, loose or soft fill, excavated pavement, construction debris, or refuse.

B. Backfill: Approved material used to fill excavations or trenches.

C. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated on the Drawings (limits of excavation).

D. Import Fill: Approved material used to fill excavations or trenches.

E. Structures: Buildings, footings, foundations, pipes, pipelines, pipe supports, ducts, retaining walls, slabs, tanks, curbs, fences, manholes, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.

F. Subgrade: Surface or elevation remaining after completing excavation.

G. Unacceptable Materials: Materials that do not comply with the requirements for acceptable material or which cannot be compacted to the specified or indicated density.

H. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.5 SUBMITTALS

A. Contractor shall provide Product Data for the following:

1. Import fill

B. Certifications:

1. Contractor shall submit the name and contact information for all proposed material sources and certifications from the manufacturer or supplier that the materials are from a new source, not recycled, and are free of any dredge sand and free of any chemical contamination for the following materials.
   a. Import Fill

2. Contractor shall submit certificate of compliance indicating that all materials comply with the specifications.

C. Sampling and Analytical Plan: Contractor shall include a sampling and analytical plan in the Construction Work Plan for Engineer’s approval prior to collecting samples of

Import Fill. The sampling and analytical plan shall be coordinated with requirements of Paragraph 1.6 (Quality Assurance) and include the following:

1. Clearly indicate the source(s) of all Import Fill.
2. Indicate Contractor's plan for collecting representative discrete samples from the supplier.
3. Name, address and contact of the California-certified laboratory that will composite samples before analyses.
4. List of proposed laboratory analyses and testing methods.

D. Analytical Results for Import Fill: Contractor shall submit for Engineer's review and approval the analytical results for all analyses included in the sampling and analytical plan. Engineer will compare the analytical results of the samples with the standards included in DTSC's Information Advisory, Clean Imported Fill Material Fact Sheet (dated October 2001) for residential uses, background concentrations, and/or other appropriate regulatory levels. Engineer may require additional laboratory analyses if concentrations exceed the acceptable criteria. Materials with concentrations exceeding the acceptable criteria will be rejected and Contractor shall be required to propose alternative source(s) for the materials.

E. Classification according to ASTM D2487 for Import Fill; particle size gradation for Import Fill per ASTM D422 and AASHTO requirements, and laboratory compaction curve according to ASTM D1557 for Import Fill.

F. Field Test Reports: Contractor shall provide Field Test Reports from a qualified testing agency.

1.6 QUALITY ASSURANCE

A. Samples: Contractor shall notify Engineer a minimum of 48 hours before obtaining samples of Import Fill. Engineer may choose to be present while samples are obtained. Contractor shall endeavor to collect samples from source stockpiles, as possible. Contractor shall notify Engineer prior to sample collection that samples will be collected from source stockpiles or will be provided in sacks from the source management in cases where access cannot be granted to Contractor and Engineer for sample collection directly from stockpiles. Contractor shall make available to Engineer the source(s) of all Import Fill materials a minimum of 30 days prior to bringing any materials onsite.

B. Contractor shall collect representative discrete samples of Import Fill materials from the supplier and submit the samples to a California-certified laboratory to composite before analyses. Engineer will reject any samples containing any non-naturally occurring chemical constituents or naturally occurring chemicals at levels above regulatory limits. In accordance with the DTSC Fill Advisory (2001) and depending on the source of the materials, Engineer may require the following laboratory analyses for the composite samples:

1. volatile organic compounds (VOCs) using EPA method 8021 or 8260B, as appropriate and combined with collection by EPA Method 5035;;
2. semi-volatile organic compounds (SVOCs) using EPA Method 8270C;

3. total petroleum hydrocarbons (TPH) using Modified EPA Method 8015;
4. heavy metals including lead using EPA Methods 6010B and 7471A;
5. asbestos (OSHA Method ID-191); and
6. polychlorobiphenyls (PCBs) using EPA Method 8082 or 8080A.

C. Contractor shall employ an independent testing laboratory to perform particle size and gradation analyses in accordance with ASTM D422, and to determine compaction characteristics in accordance with ASTM D1557 for all the proposed fill materials, and field compaction operations. The independent testing laboratory shall have the following qualifications:

1. Be accredited by the American Associates of State Highway and Transportation Officials (AASHTO) Accreditation Program.

D. Contractor shall retain a private utility-locating contractor to locate utilities within the work area in accordance with Related Section for work restrictions.

E. Pre-excavation meeting: Contractor shall conduct a meeting at the Project Site prior to performing Excavation activities. This meeting may be conducted in conjunction or coordination with meetings required by other Relevant Sections.

1. Review methods and procedures related to excavation including, but not limited to, the following:
   a. Health and Safety
   b. Available geotechnical information.
   c. Existing utilities and subsurface conditions.
   d. Proposed excavation and spoils handling, including handling of saturated soils.
   e. Proposed equipment.
   f. Placement, handling, and monitoring of excavation support and protection system.
   g. Working area location and stability.
   h. Soil stockpiles management.
   i. Environmental controls.

F. Contractor shall keep excavations free from water during construction. Backfill material shall not be placed in water. Water shall not be allowed to rise upon or flow over the backfill material.

G. Contractor shall be solely responsible for making all excavations in a safe manner. All excavation shall comply with the requirements of OSHA excavation safety standards (29 CFR Part 1926 Subpart P) and State requirements. Where conflict between OSHA and State regulations exists, the more stringent requirements shall apply.

H. Contractor shall not excavate, construct embankments, or fill until all the required submittals have been reviewed and approved.

1.7 PROJECT CONDITIONS

A. Traffic Control: Contractor shall strictly adhere to any and all requirements or restrictions set forth in Related Sections for working near the traffic right-of-ways.

B. Existing Utilities: Contractor shall adhere to requirements or restrictions set forth in Section 011400 for identifying, protecting, interrupting, and accommodating active utilities and decommissioning inactive utilities.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Engineer shall approve all import materials prior to their use.

B. Import Fill: Import fill shall be non-expansive soil with a plasticity index no greater than 15 percent, not greater than 20 percent of particles by weight passing the number 200 sieve, with an organic content of less than 3 percent and of a suitable gradation to provide a firm unyielding surface when appropriately compacted. The material shall contain no particles greater than 1-inch diameter. No recycled material shall be utilized as Import Fill.

PART 3 - EXECUTION

3.1 PREPARATION

A. Contractor shall protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.

B. Contractor shall remove the concrete pads present in different portions of the site prior to performing any excavation, following asbestos testing, and recycling regulations.

C. Contractor shall protect and maintain erosion and sedimentation controls as specified in Related Section for temporary environmental controls during earthwork operations.

3.2 EXCAVATION, GENERAL

A. Execution of any earth excavation shall not commence until the related submittals are reviewed by the Engineer and all comments are satisfactorily addressed.

B. Authorized excavation includes excavation of soil, to the vertical and horizontal limits shown on the Drawings, and as defined by the Engineer and other parts of these Contract Documents. The Subcontractor shall supply sufficient excavation equipment to perform the Work.

C. Unauthorized excavation consists of excavation of on-site materials beyond the proposed limits of excavation, as defined by the Drawings, without specific direction of

the Engineer. Unauthorized excavation also consists of excavation of other on-site soils and materials not specifically addressed in these Contract Documents, or any removal/disturbance/damage of soils on adjacent, off-site properties. Unauthorized excavation and resultant remedial Work shall be at the Contractor's expense. Unauthorized excavations shall be backfilled and compacted using the same procedures as specified for authorized excavations of same classification.

D. Stability of Excavations: Contractor shall be solely responsible for excavation safety including stability of excavations and competent person requirements. Unsupported cut slopes should not be cut steeper than 1.5 foot in the horizontal to 1 foot in the vertical. Side slopes of excavations shall also comply with local codes and/or ordinances having jurisdiction, such as Cal/OSHA. Shore and brace in accordance with safe and acceptable engineering practice and local building codes and conditions where sloping is not possible because of space restrictions or stability of material excavated. Maintain sides and slopes of excavations in safe condition until completion of backfilling. Provide proposed excavation support means and methods as part of the Construction Work Plan. Areas where sidewall sloping is acceptable are shown on the Drawings; these areas shall be backfilled with the soil excavated to construct the sidewall sloping and any supplemental backfill required shall be common fill borrow.

E. Engineer shall approve all excavated surfaces prior to placing any fill. Excavations shall be free of organics, roots over 1 inch in diameter, standing water, or debris before subgrade preparation and backfill activities begin.

F. The quantity of exposed soil shall be minimized by the coordination of work and construction sequencing.

G. Vapor Control. Manage the area of exposed soil as necessary so that vapors can be effectively controlled to protect workers and the public in accordance with the requirements of Section 015719. Vapors shall not be detectable by smell beyond the boundaries of the Site. Should additional vapor control be required, Contractor shall limit the size of the excavation or provide additional vapor suppressant in accordance with Section 015719.

3.3 EXISTING UTILITIES

A. Procedures and requirements for identification and protection of existing utilities are described in Section 011400

3.4 SOIL EXCAVATION SEQUENCING

A. Perform soil excavation, removal, and handling in accordance with the requirements of this Section and as further detailed in the Contractor's Construction Work Plan. Contractor identified means and methods described in the Plan shall be followed.

B. Minimize open excavation area to limit air emissions and dewatering effort associated with stormwater runoff.

C. Sequence soil excavation so that excavation of impacted soils designated for disposal as burial at the landfill are properly managed, segregated, and kept separate from other impacted soil.

3.5 MAINTENANCE OF EXCAVATIONS

A. Excavations shall be maintained until restoration is complete. Sloughed soil due to stormwater or groundwater instruction shall be removed and disposed as impacted material of the same classification as the open excavation.

3.6 SOIL EXCAVATION COMPLETION

A. Determination that the excavation is complete shall be made by the Engineer based on surveyed or measurements that indicate the horizontal and vertical limits shown on the drawings have been achieved.

3.7 BACKFILL

A. Contractor shall place backfill in excavations promptly, but not before completing the following:

1. Decommissioning abandoned underground utilities.

2. Removing trash, debris, and loose soil from the demolition of former structures.

B. No excavated soil will be reused for backfill. All excavated soil shall be transported off-site for disposal.

C. Placement of Import Fill: Import fill soil shall be placed in a maximum loose lift of eight (8) inches resulting in a maximum compacted lift of approximately eight (6) inches. Compaction shall be accomplished by designated compaction equipment with a minimum weight of 40,000 lbs.

D. Each lift of fill material shall be placed horizontally and shall be thoroughly tamped or rolled to the required degree of compaction by mechanical tampers or vibrators as specified herein. Successive lifts shall not be placed until the lift under construction has been thoroughly compacted and tested.

E. Fill materials shall be placed in such a manner as to facilitate drainage at all times. Ponding of surface-water run-off shall not be permitted.

F. Import fill soil shall not be placed over a lift which has not been tested and/or approved by the Engineer.

3.8 SOIL MOISTURE CONTROL

A. Contractor shall uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.

1. Do not place backfill or import fill material on surfaces that are muddy.

2. Remove and replace, or scarify and air dry otherwise acceptable soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.9 GRADING

A. General: Contractor shall uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.

1. Provide a smooth transition between adjacent existing grades and new grades.
2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.

3.10 BACKFILL COMPACTION

A. All fill and backfill will be compacted by mechanical means to at least 90% of the maximum dry density as established by ASTM D1557 or AASHTO T180.

3.11 FIELD QUALITY CONTROL

A. Field Testing and Inspections:

1. Contractor shall hire an independent laboratory approved by the Engineer to perform field testing for compaction and moisture content of the subgrade and fill and backfill. Field testing shall be performed in accordance with ASTM D6938 for in-place density and moisture content. The Engineer may conduct additional field testing. Provide 48 hours advance notice to Engineer for testing to occur without interrupting work.
2. Contractor shall not proceed with placement of next lift or course of backfill without the approval of Engineer based upon review of compaction testing results and acceptance of the completed lift.
3. In the event compacted material does not meet specified in-place density, material is to be recompacted until specified results are obtained at no additional cost. Contractor shall be responsible for costs of additional inspection and re-testing resulting from non-compliance.
4. Contractor shall demonstrate all subgrade, and finished grade elevations to Engineer using on-site leveling equipment.
5. Contractor’s third party testing engineer shall complete a daily compaction testing record form and compaction test location diagram of all backfill compaction testing performed during construction and shall submit a hardcopy of each to the Engineer at the end of each work day.

3.12 IMPORT FILL

A. Import fill soil generated from each unique source shall be sampled for geotechnical and analytical requirements by the Contractor at the minimum sampling frequency listed below.

1. Up to 1,000 CY – one sample per 250 CY.

2. 1,000 CY to 5,000 CY – four samples for first 1,000 CY plus one sample per each additional 500 CY.

3. Greater than 5,000 CY – 12 samples for first 5,000 CY plus one sample per each additional 1,000 CY.

3.13 FINAL GRADING

A. The Contractor shall perform finish to match existing grades and perform site restoration.

3.14 CONFIRMATION SAMPLING

A. Confirmation sampling of excavation sidewalls and bottoms will be conducted by the Engineer. Contractor shall facilitate access to the sampling areas and account for sampling activities in their construction schedule. Based on the results of confirmation sampling, additional excavation may be required as directed by the Engineer.

3.15 DISPOSAL OF WASTE MATERIALS

A. Contractor shall remove all waste material, including excavated soil, construction waste, asphalt debris, and contact water, and legally dispose of it offsite in accordance with Related Sections.

B. Contractor shall remove any and all excess unused imported fill materials from the Site at no expense to Engineer or Owner.

END OF SECTION 312300