LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING

ADDENDUM NO. #1

TRACK & FIELD IMPROVEMENTS – INC 1

LITTLE JOB #612-12353-02

DSA: A# 03-120007 File #56-H4

Hueneme High School
500 W. Bard Rd.
Oxnard, CA 93033

October 21, 2019

LITTLE
1300 Dove Street, Suite 100
Newport Beach, CA 92660

Architect- Jay R. Tittle, C- 12955

1. PART 1 - GENERAL

1.1. The following revisions and/or clarifications shall be made to the Bidding Requirements and Contract Documents. Revise and amend the Documents for the above named project in accordance with this Addendum. The bid shall reflect these addendum changes and each bidder shall make reference in their bid to this addendum.

1.2. All Bidding Requirements and Contract Documents shall apply to this addendum as originally indicated in the applicable portions of the contract documents, unless otherwise modified by this addendum.

1.2.1. No Previous Addendum issued.

1.3. GENERAL CLARIFICATIONS

1.3.1. The following clarifications are issued to all bidders as information for use in preparing bids:

1.3.1.1. ACAD files will be provided to successful Bidder.

1.3.1.2. Note, North line should be 90 anticlockwise from what is shown construction plan (C3.0, C3.1, C3.2), grading plan (C4.0, C4.1, C4.2), and storm drain plan (C5.0, C5.1, C5.2).

1.3.1.3. Note that Electrical plans have been updated to show run and cable routes, noting that existing conduits, conductor info, and box sizes shown as applicable.

1.3.1.4. Add 'Partial Underground Utility Map' (sheets 1 – 4), for reference noting the following: '***DSA approved construction documents were prepared using Armstrong & Brooks Consulting Engineers, Inc. survey files where majority of the existing utilities were mapped using available records and some were verified at field. Recently, 'C-below' was contracted to perform Underground Utility survey and they have provided us with their maps for contractor's reference. For bidding purposes, contractor shall consider information shown on these maps in addition to what is shown on DSA approved plans as some of the existing utilities within work area will be impacted by proposed improvements***.'

1.3.1.5. Add 'TOPOGRAPHIC SITEPLAN' (sheets 1 – 9), for reference noting the following: '***DSA approved construction documents were prepared using Armstrong & Brooks Consulting Engineers, Inc. topo survey files where the linework on their survey files were mostly from aerial survey. Recently, surveyor was tasked to update their topographic survey files to include linework on their survey maps where detailed foot survey was performed at field. Attached are updated topographic survey files for reference. For bidding purposes, contractor shall consider information shown on these maps in addition to what is shown on DSA approved plans.'***

2. PART 2 - PROJECT MANUAL

2.1. CHANGES TO PROJECT MANUAL TABLE OF CONTENTS

2.1.1. Division 00 01 10, TABLE OF CONTENTS

2.1.1.1. Delete in its entirety, and replace with the attached Table of Contents.

2.2. SPECIFICATIONS ISSUED

2.2.1. Section 01 10 00, Summary - Delete Section 01 10 00 originally issued and replace with revised Section 01 10 00 (attached).

2.2.2. Section 26 05 05, Selective Demolition for Electrical - Delete Section 26 05 05 originally issued and replace with revised Section 26 05 05 (attached).

2.2.3. Section 32 18 13, Synthetic Grass Surfacing (CMAS) - Delete Section 32 18 13 originally issued and replace with revised Section 32 18 13 (attached).

2.2.4. Section 32 18 23.39, Synthetic Running Track Surfacing (CMAS) - Delete Section 32 18 23.39 originally issued and replace with revised Section 32 18 23.39 (attached).

2.2.5. Section 32 18 23.39A, **Beynon Scope Appendix** - Add new Section 32 18 23.39A **Beynon Scope Appendix** (attached).

2.2.6. Section 32 18 23.39A, **D-CST-Track Protection Model** - Add new Section 32 18 23.39A **D-CST-Track Protection Model** (attached).

2.3. NARRATIVE CHANGES TO SPECIFICATIONS

2.3.1. Section 32 13 13, Concrete Paving - Modify this Section as follows:

2.3.1.1. Revise paragraph 2.01C to read – '**2.01C: Curbing, gutters, related drainage component: 3,000 psi, 28-day concrete'**

2.3.1.2. Revise paragraph 2.05B to read – '**2.05B: Contractor shall use Type II Portland Cement instead of Type I'**

2.3.1.3. Revise paragraph 2.07B to read – '**2.07B: Contractor shall use Class 520-B-3500 instead of Class 520-B-3000'**

2.3.1.4. Revise paragraph 2.07C to read – '**2.07C: Minimum 28 days compressive strength as indicated on drawings, if not indicated; 3500 psi minimum'**

2.3.1.5. Revise paragraph 2.07F to read – '**2.07F: Water-cement ratio: shall be 0.45 and not exceed 0.5'**

2.3.2. Section 32 16 13.50, Concrete Curbs and Flatwork at Track - Modify this Section as follows:

2.3.2.1. Revise paragraph 2.01C to read – **'2.01C: Slump: 4", water-cement ratio: 0.45 and not exceed 0.5'**

2.3.3. Section 33 42 11, Stormwater Gravity Piping - Modify this Section as follows:

2.3.3.1. Revise paragraph 2.04C2 to read – **'2.04C2: At pedestrian areas provide ADA compliant and Heel proof grates'**

2.3.3.2. Revise paragraph 2.04D to read – '**2.04D: See civil plans for information'**

2.3.3.3. Revise paragraph 2.04E to read – '**2.04E: See civil plans for information'**

2.3.3.4. Revise paragraph 2.05 to read – **'2.05: deleted. (not applicable)'**

2.3.3.5. Revise paragraph 3.07 to read – '**3.07: deleted. (not applicable)'**

3. PART 3 - DRAWINGS

3.1. CIVIL DRAWINGS ISSUED

3.1.1. The following Addendum ("AD") Drawings, marked Delta 1, are issued:

3.1.1.1. Drawing C1.1: Replace with Drawing AD1-C1.

3.1.1.2. Drawing C2.0: Revise currently issued Drawing per AD1-C2.

3.1.1.3. Drawing C5.0: Replace with Drawing AD1-C3.

3.1.2. Narrative changes to Civil Drawings are issued as follows:

3.1.2.1. Drawing C1.0 - Modify as follows:

3.1.2.1.1. Add Note A: If there is a discrepancy between Geotechnical report and project manual regarding grading, earthwork and fill recommendations then Geotechnical report recommendations shall supersede the project manual.

3.1.2.1.2. Add Note B: Contractor shall attain a licensed geotechnical engineer to provide Geotechnical Engineering services during the construction satisfying testing and observation requirements outlined in project Geotechnical report to ensure work is performed in compliance with construction documents and specifications and geotechnical report.

3.2. ARCHITECTURAL DRAWINGS ISSUED

3.2.1. Narrative changes to Architectural Drawings are issued as follows:

3.2.1.1. Drawing G0.1.1, Title Sheet/Sheet Index - Modify as follows:

3.2.1.1.1. Add new sheet 'ED-200 (AD1-E1)', Enlarged Electrical Demo Site Plan – Track & Field' to sheet index.

3.3. ELECTRICAL DRAWINGS ISSUED

3.3.1. The following Addendum ("AD") Drawings, marked Delta 1, are issued:

3.3.1.1. Drawing E-200: Replace with Drawing AD1-E1.

3.3.1.2. Add Drawing ED-200: issue Drawing AD1-E2.

3.3.2. Narrative changes to Electrical Drawings are issued as follows:

3.3.2.1. Drawing E-200 – Add the following note:

3.3.2.1.1. **'All the damaged underground electrical conductors and conduits due to construction shall be replaced and buried 24" below grade encased in concrete with the new one and intercepted to the existing one. New junction box shall be installed if needed for proper interception. Contractor shall verify existing sizing and rating prior bid/installation**.'

END OF ADDENDUM #1

Enclosures:

I) Reference Plans Issued:
   a) 'Partial Underground Utility Map' (sheets 1 – 3)
   b) 'TOPOGRAPHIC SITEPLAN' (sheets 1 – 6)

II) New Project Manual Documents Issued:
   a) Section 00 01 10
   b) Section 01 10 00
   c) Section 26 05 05
   d) Section 32 18 13
   e) Section 32 18 23.39
   f) Section 32 18 23.39A **Beynon Scope Appendix**
   g) Section 32 18 23.39A **D-CST-Track Protection Model**

III) Drawings Issued:
   a) Drawings AD1-C1 through AD1-C3, Delta 1.
   b) Drawings AD1-E1 and AD1-E2, Delta 1.

UNDERGROUND UTILITY MAP

WITHIN THE CITY OF OXNARD, COUNTY OF VENTURA, CALIFORNIA

PREPARED FOR:

OXNARD UNION HIGH SCHOOL DISTRICT

UTILITY QUALITY LEVELS NOTES

INFORMATION PROVIDED FROM AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) CI/ASCE 38-02 MANUAL.

UTILITY QUALITY LEVEL A

PRECISE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES OBTAINED BY THE ACTUAL EXPOSURE (OR VERIFICATION OF PREVIOUSLY EXPOSED AND SURVEYED UTILITIES) AND SUBSEQUENT MEASUREMENT OF SUBSURFACE UTILITIES, USUALLY AT A SPECIFIC POINT. MINIMALLY INTRUSIVE EXCAVATION EQUIPMENT IS TYPICALLY USED TO MINIMIZE THE POTENTIAL FOR UTILITY DAMAGE. A PRECISE HORIZONTAL AND VERTICAL LOCATION, AS WELL AS OTHER UTILITY ATTRIBUTES, IS SHOWN ON PLAN DOCUMENTS. ACCURACY IS TYPICALLY SET TO 15-MM VERTICAL AND TO APPLICABLE HORIZONTAL SURVEY AND MAPPING ACCURACY AS DEFINED OR EXPECTED BY THE PROJECT OWNER.

UTILITY QUALITY LEVEL B

INFORMATION OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF SUBSURFACE UTILITIES. QUALITY LEVEL B DATA SHOULD BE REPRODUCIBLE BY SURFACE GEOPHYSICS AT ANY POINT OF THEIR DEPICTION. THIS INFORMATION IS SURVEYED TO APPLICABLE TOLERANCES DEFINED BY THE PROJECT AND REDUCED ONTO PLAN DOCUMENTS.

UTILITY QUALITY LEVEL C

INFORMATION OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE-GROUND UTILITY FEATURES AND BY USING PROFESSIONAL JUDGMENT IN CORRELATING THIS INFORMATION TO QUALITY LEVEL D INFORMATION.

UTILITY QUALITY LEVEL D

INFORMATION DERIVED FROM EXISTING RECORDS OR ORAL RECOLLECTIONS.

UTILITY NOTES

1. FACILITIES (UTILITY LINES) SHALL BE LOCATED AND MARKED PRIOR TO EXCAVATION. CALL (800) 90-BELOW.
2. CONTRACTOR SHALL HAND-EXPOSE TO A POINT OF NO CONFLICT 24" ON EITHER SIDE OF THE UNDERGROUND FACILITY, REGARDLESS OF THE ESTIMATED DEPTH.
3. DEPTHS SHOWN ARE APPROXIMATE. ESTIMATED DEPTHS ARE FROM THE GROUND SURFACE TO THE CENTER OF THE FACILITY, INVERT OF WASTE LINES, OR TO THE FACILITY TRACER WIRE. DEPTH ESTIMATES SHOULD BE USED WITH CAUTION AND MAY VARY ALONG THE LENGTH OF THE FACILITY.
4. UTILITY BRACKETS ARE SHOWN TO DEMONSTRATE MULTIPLE LINES TRAVELING TOGETHER IN EITHER A DUCTBANK OR BUNDLE.
5. THE SCOPE OF THIS SURVEY DOES NOT INCLUDE FACILITY SIZE OR NUMBER OF CONDUIT IN MULTIPLE CONDUIT RUNS. IRRIGATION LINES ARE NOT INCLUDED IN THIS SURVEY.
6. THE BACKGROUND SITE PLAN USED IN PREPARING THIS MAP WAS PREPARED BY OTHERS AND PROVIDED TO C BELOW BY THE CLIENT. C BELOW MAKES NO REPRESENTATION AS TO THE ACCURACY OF THE PLAN.
7. IN THE EVENT THE INFORMATION SHOWN IN THIS PLAN VARIES FROM THE ACTUAL SITE CONDITIONS, C BELOW SHALL BE NOTIFIED WITHIN 24 HOURS AFTER DISCOVERY OF THE CONFLICT.

UNDERGROUND LINE LEGEND

UTILITY QUALITY LEVEL B:

ELECTRICAL	E
GAS	G
COMMUNICATION	C
WATER	W
SANITARY SEWER	SS
STORM DRAIN	SD
POSSIBLE LINE LOCATION, BASED ON GPR DETECTION	U
STREET LIGHT	SL
AIR	AIR
TRAFFIC SIGNAL	TS
FIRE WATER	FW
CHILLED WATER	CHW
DOMESTIC WATER	DW
HOT WATER	HW

UTILITY QUALITY LEVEL C:

ELECTRICAL	E
GAS	G
COMMUNICATION	C
WATER	W
SANITARY SEWER	SS
STORM DRAIN	SD
STREET LIGHT	SL
AIR	AIR
TRAFFIC SIGNAL	TS
FIRE WATER	FW
CHILLED WATER	CHW
DOMESTIC WATER	DW
HOT WATER	HW

UTILITY QUALITY LEVEL D:

ELECTRICAL	E
GAS	G
COMMUNICATION	C
WATER	W
SANITARY SEWER	SS
STORM DRAIN	SD
STREET LIGHT	SL
AIR	AIR
TRAFFIC SIGNAL	TS
FIRE WATER	FW
CHILLED WATER	CHW
DOMESTIC WATER	DW
HOT WATER	HW

KEY NOTES

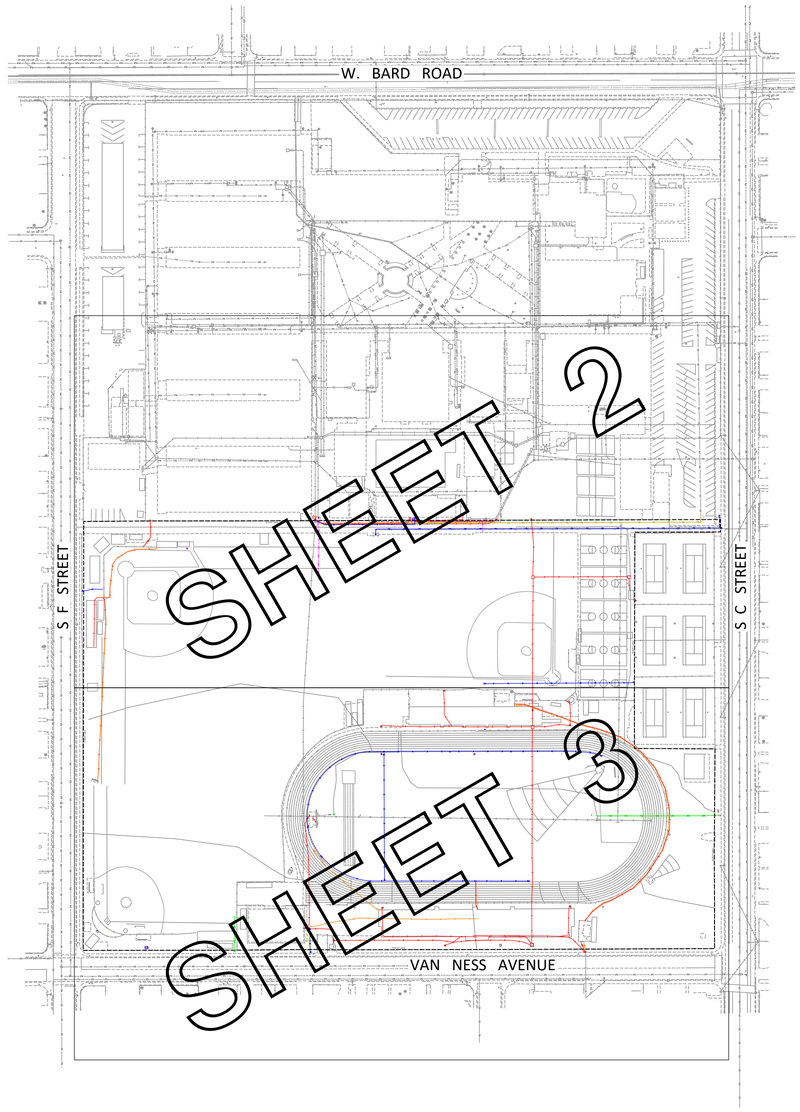
1. NON-CONDUCTIVE, UNABLE TO LOCATE PAST THIS POINT.
2. NO ACCESS, UNABLE TO LOCATE PAST THIS POINT.
3. BLOCKED
4. AT BUILDING
5. AT DROP
6. AT RISER

ABBREVIATIONS

CAB	CABINET
COMM	COMMUNICATION
ELEC	ELECTRIC
ICV	IRRIGATION CONTROL VALVE
IRR	IRRIGATION
PB	PULL BOX
SD	STORM DRAIN
TRN	TRANSFORMER
UNK	UNKNOWN
VLT	VAULT
WTR	WATER
WV	WATER VALVE

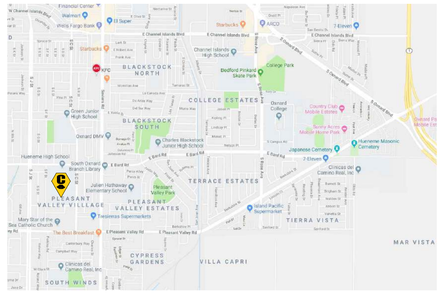
LEGEND/SYMBOL

○	CLEAN OUT
1'-6"	DEPTH FROM SURFACE
INVERT 1'-6"	INVERT DEPTH FROM TOP OF GRATE
	FIRE HYDRANT
	LIGHT POLE
	MANHOLE
	METER
	POWER POLE
	PULL BOX
	VALVE
	VAULT



KEY MAP

NOT TO SCALE



VICINITY MAP

NOT TO SCALE

DRAWING SHEETS	
SHEET NO.	SHEET TITLE
1	COVER SHEET
2-3	UTILITY MAP

UTILITY DEPICTION

UNDERGROUND UTILITY DEPICTION SHOWN HEREON IS BASED ON LOCAL CONTROL AND/OR ON THE SMARTNET RTK NETWORK, UNLESS STATED OTHERWISE.

C BELOW SUBSURFACE IMAGING
14280 EUCLID AVE
CHINO, CA 91710
P: 888-902-3569
F: 909-606-6555
www.cbelow.com
GROUND PENETRATING RADAR (GPR)
UTILITY LOCATING
RADIOGRAPHY
POTHOLING
MAPPING

NOTES: The services provided by C Below, Inc. do not relieve the Client and/or property owner of the responsibility of having to comply with California Government Code §§4216-4216.9. It is expressly understood by the Client and/or owner that CBSI services are not a substitute for compliance with California Code §§4216-4216.9.

PROJECT:

PARTIAL UNDERGROUND UTILITY MAP FOR:
HUENEME HIGH SCHOOL
500 W. BARD ROAD
OXNARD, CA 93033

CLIENT:

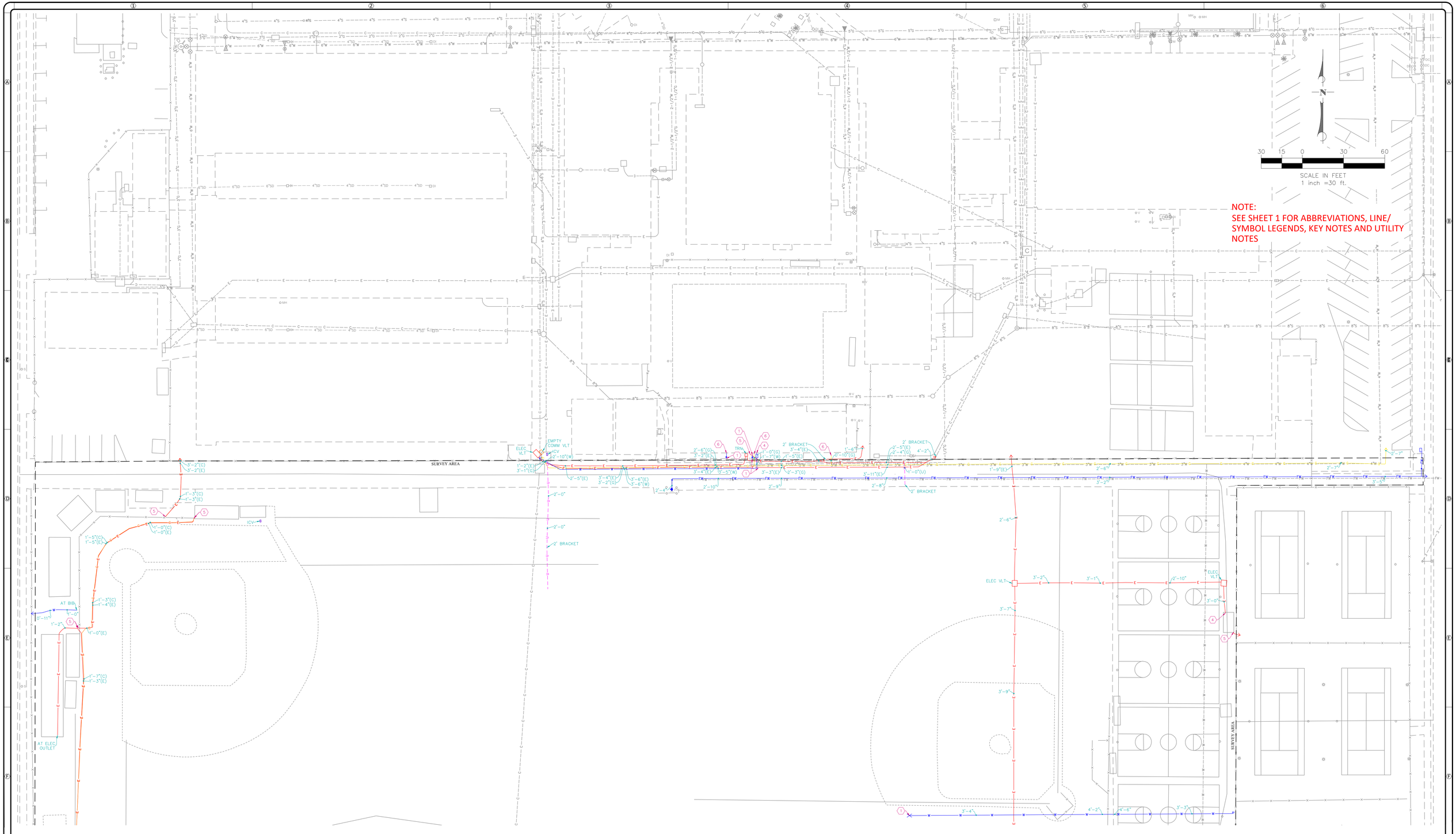
OXNARD UNION HIGH SCHOOL DISTRICT
309 S. "K" STREET
OXNARD, CA 93030

REVISIONS

NO	DATE	BY	DESCRIPTION

DATE LOCATED: 10/2019
DRAWN BY/DATE: LB 10/11/2019
TECHNICIAN CHECK BY/DATE: G. DILLON
QC CHECKED BY/DATE: OG 10/11/2019
DRAWING NAME: COVER SHEET
PROJECT NO: 19-0975
SCALE: N.T.S.

SHEET 1 OF 3



C BELOW SUBSURFACE IMAGING
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CHINO, CA 91710
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www.cbelow.com

GROUND PENETRATING RADAR (GPR)
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PROJECT:
PARTIAL UNDERGROUND UTILITY MAP FOR:
HUENEME HIGH SCHOOL
500 W. BARD ROAD
OXNARD, CA 93033

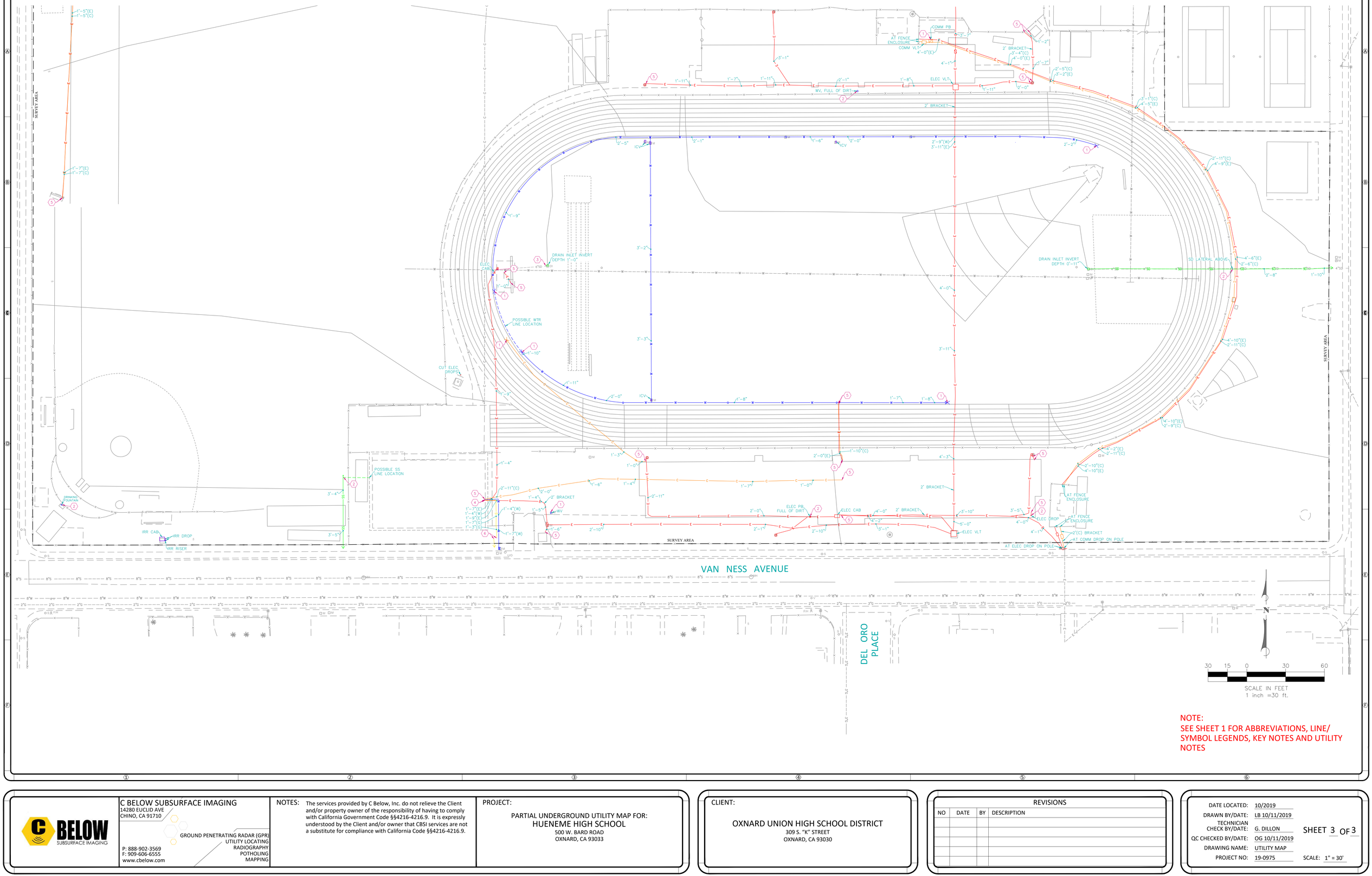
CLIENT:
OXNARD UNION HIGH SCHOOL DISTRICT
309 S. "K" STREET
OXNARD, CA 93030

REVISIONS

NO	DATE	BY	DESCRIPTION

DATE LOCATED: 10/2019
DRAWN BY/DATE: LB 10/11/2019
TECHNICIAN CHECK BY/DATE: G. DILLON
QC CHECKED BY/DATE: OG 10/11/2019
DRAWING NAME: UTILITY MAP
PROJECT NO: 19-0975
SCALE: 1" = 30'

SHEET 2 OF 3



NOTE:
SEE SHEET 1 FOR ABBREVIATIONS, LINE/ SYMBOL LEGENDS, KEY NOTES AND UTILITY NOTES

C BELOW SUBSURFACE IMAGING
14280 EUCLID AVE
CHINO, CA 91710
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PROJECT:
PARTIAL UNDERGROUND UTILITY MAP FOR:
HUENEME HIGH SCHOOL
500 W. BARD ROAD
OXNARD, CA 93033

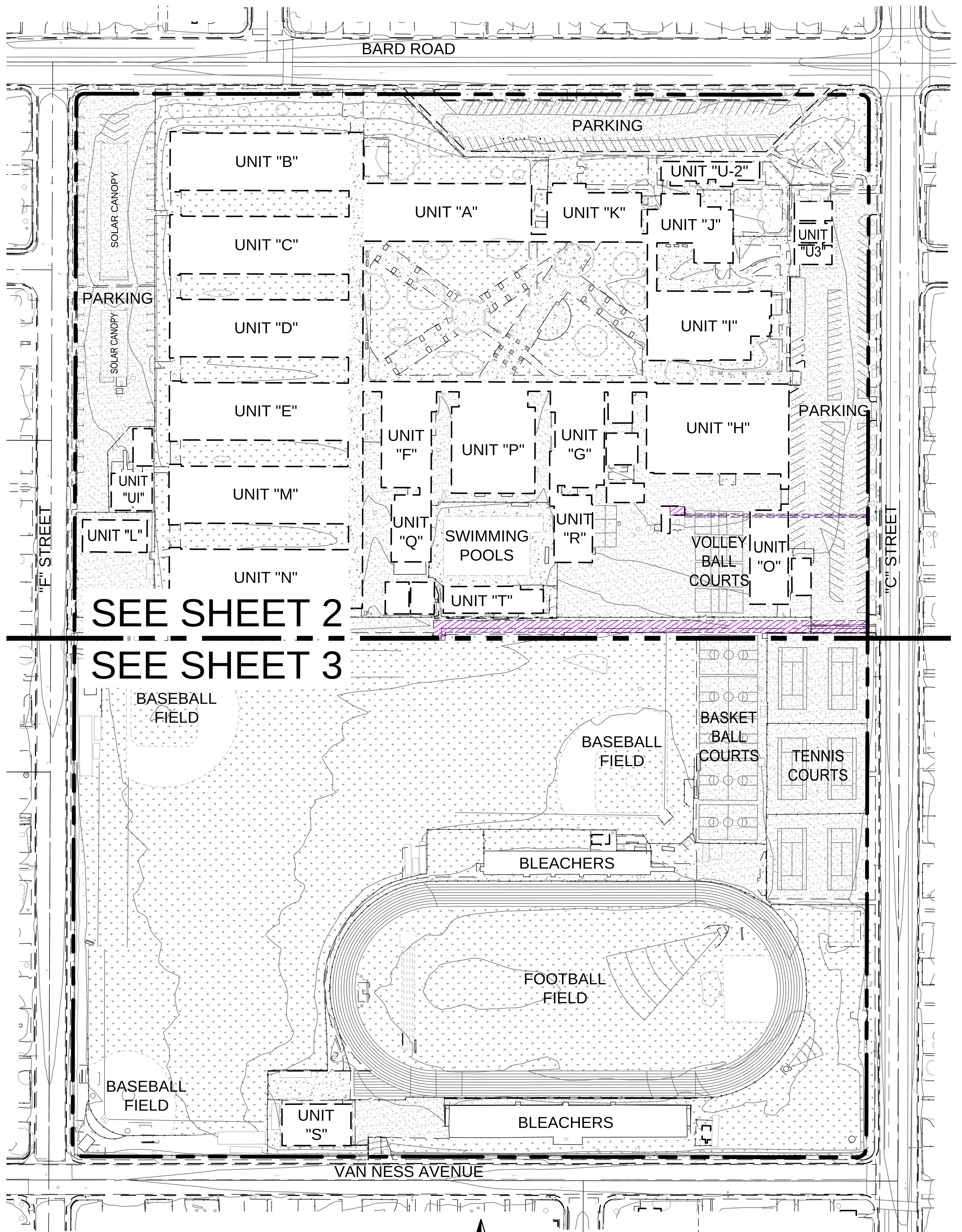
CLIENT:
OXNARD UNION HIGH SCHOOL DISTRICT
309 S. "K" STREET
OXNARD, CA 93030

REVISIONS

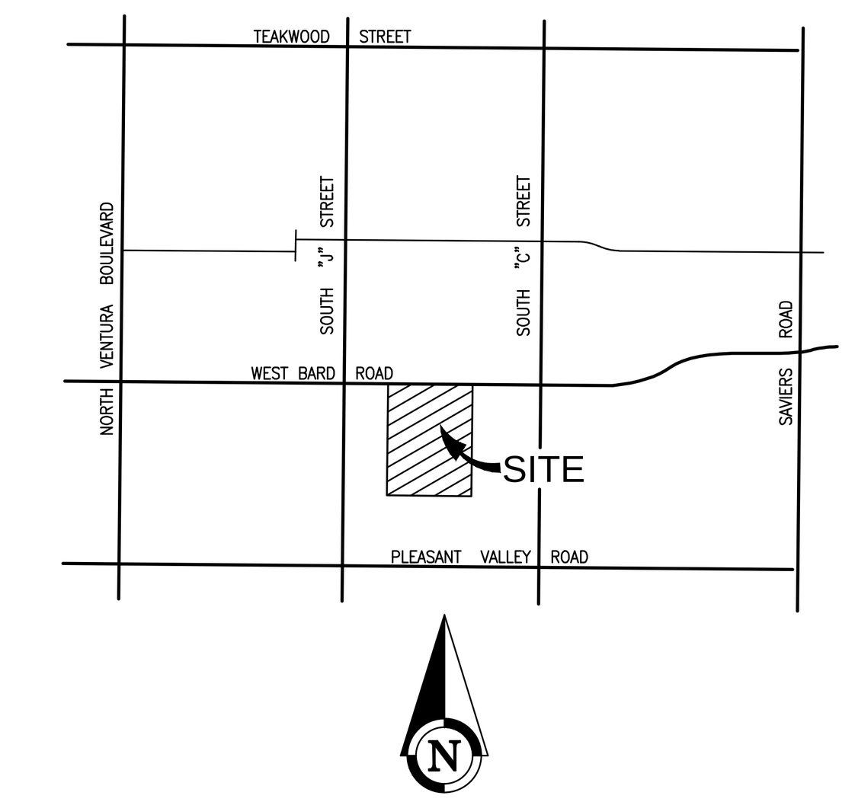
NO	DATE	BY	DESCRIPTION

DATE LOCATED: 10/2019
DRAWN BY/DATE: LB 10/11/2019
TECHNICIAN CHECK BY/DATE: G. DILLON
QC CHECKED BY/DATE: OG 10/11/2019
DRAWING NAME: UTILITY MAP
PROJECT NO: 19-0975
SCALE: 1" = 30'

TOPOGRAPHIC SITEPLAN
FOR
HUENEME HIGH SCHOOL
OXNARD, CA



INDEX MAP
1"=80'



VICINITY MAP
NTS

LEGAL DESCRIPTION (FROM TITLE REPORT)

ALL THAT CERTAIN REAL PROPERTY SITUATED IN THE COUNTY OF VENTURA, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

A PART OF SUBDIVISIONS 92 AND 93 OF RANCHO EL RIO DE SANTA CLARA O' LA COLONIA, IN THE CITY OF OXNARD, COUNTY OF VENTURA, STATE OF CALIFORNIA, AS PER PARTITION MAP FILED IN THE OFFICE OF THE COUNTY CLARK OF SAID COUNTY IN ACTION ENTITLED "THOMAS A. SCOTT, ET AL., PLFFE, VS. RAFAEL GONZALES, ET AL., DEFTS." PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN THE NORTH LINE OF SAID SUBDIVISION 93 DISTANT EAST 865.70 FEET, MORE OR LESS, FROM THE NORTHWEST CORNER OF SAID SUBDIVISION 93, WHICH POINT IS MARKED WITH A 2 1/2-INCH IRON PIPE MARKED RE 4825 AND IS THE NORTHEAST CORNER OF THE LAND OF LOUIS E. BRUCKER AS DESCRIBED IN THE DEED RECORDED IN THE OFFICE OF THE COUNTY RECORDER OF VENTURA COUNTY IN BOOK 558, PAGE 412, OF OFFICIAL RECORDS; THENCE FROM SAID POINT OF BEGINNING.

1ST: NORTH 89° 55' 32" EAST ALONG THE NORTHERLY LINE OF SAID SUBDIVISION 93, 923.15 FEET TO A 2-INCH IRON PIPE; THENCE,

2ND: SOUTH 0° 02' 49" WEST 1415.58 FEET TO A 2-INCH IRON PIPE; THENCE,

3RD: SOUTH 89° 55' 32" WEST 923.15 FEET TO A 2-INCH IRON PIPE, WHICH POINT IS IN THE EAST LINE OF SAID LAND OF SAID LOUIS E. BRUCKER; THENCE,

4TH: NORTH 0° 02' 49" EAST 1415.58 FEET TO THE POINT OF BEGINNING.

EXCEPTING THE OIL, GAS, HYDROCARBONS, AND MINERALS LYING BELOW A DEPTH OF 200.00 FEET FROM THE SURFACE OF THE ABOVE-DESCRIBED LAND, BUT WITHOUT THE RIGHT OF ENTRY OR EXPLORATION ON OR THROUGH THE TOP 200.00 FEET OF SAID LAND; THIS EXCEPTION AND RESERVATION SHALL EXIST FOR ONLY SO LONG AS GRANTORS, OR ANY OF THEIR BROTHERS, SISTER, OR FATHER OR THE HEIRS OF ANY OF THEM, SHALL OWN ALL OR ANY PART OF THE SURFACE OF THE LAND IN SAID SUBDIVISIONS 92 AND 93; AS RESERVED BY THOMAS J. BRUCKER, ET AL., IN DEED RECORDED MARCH 31, 1953, AS INSTRUMENT NO. 7440, OFFICIAL RECORDS, AND BY LOUIS J. BRUCKER AND JAMES F. BRUCKER, IN DEED RECORDED MARCH 31, 1953, AS INSTRUMENT NO. 7442, OF OFFICIAL RECORDS.

APN: 205-0-120-275

TOPOGRAPHY

EXISTING SITE TOPOGRAPHY HAS BEEN GENERATED FROM FROM AN AERIAL SURVEY COMPILED FROM PHOTOGRAPHY BY ARROWHEAD MAPPING CORPORATION DATED MARCH 29, 2019 AND FIELD TOPOGRAPHIC SURVEY PERFORMED BY ARMSTRONG & BROOKS CONSULTING ENGINEERS, INC. DATED APRIL 24, 2019.

BENCHMARK

CITY OF OXNARD J-BARD

ELEVATION: 6.069 (NAVD 88)

DESCRIPTION: BRASS DISK STAMPED "J-BARD 2000"

LOCATION: BRASS DISK STAMPED "J-BARD 2000" SET ON TOP OF CURB AT THE NORTHWEST CORNER OF THE INTERSECTION OF BARD ROAD AND NORTHBOUND LANE "J" STREET. THE DISK IS 0.5 FEET EAST OF THE SOUTHERLY CURB RETURN.

BASIS OF BEARING

N89°54'50"E BEING THE CENTERLINE OF VAN NESS ROAD PER MAP RECORDED IN BOOK 31, PAGES 89 THROUGH 90, OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF VENTURA COUNTY, STATE OF CALIFORNIA.

EXISTING UTILITIES NOTE

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES, CONDUITS, OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. IN ORDER TO TAKE PRECAUTIONARY MEASURES TO PROTECT ALL UTILITY LINES SHOWN AND NOT SHOWN ON THESE DRAWINGS, IT IS RECOMMENDED TO CALL IN A LOCATION REQUEST TO UNDERGROUND SERVICE ALERT (USA) PH. 811, TWO (2) WORKING DAYS PRIOR TO ANY DIGGING.

SITE ADDRESS

500 WEST BARD ROAD
OXNARD, CA 93033

LEGEND

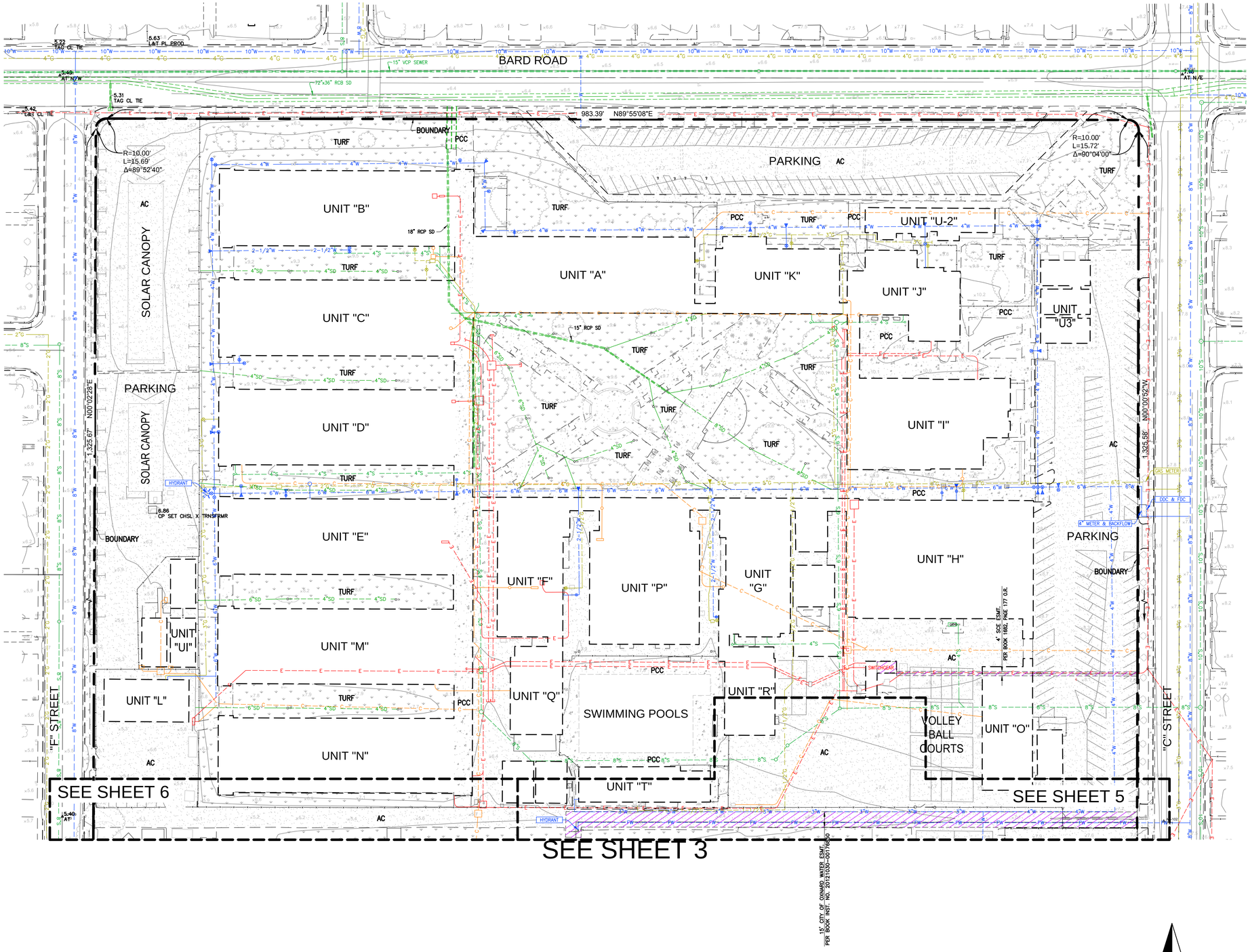
E	EXISTING ELECTRICAL
C	EXISTING COMMUNICATION
G	EXISTING GAS (SIZE PER PLAN)
S	EXISTING SEWER (<12"-SIZE PER PLAN)
	EXISTING SEWER (>12"-SIZE PER PLAN)
W	EXISTING WATER (<12"-SIZE PER PLAN)
	EXISTING WATER (>12"-SIZE PER PLAN)
FW	EXISTING FIRE WATER (SIZE PER PLAN)
SD	EXISTING STORM DRAIN (<12"-SIZE PER PLAN)
	EXISTING STORM DRAIN (>12"-SIZE PER PLAN)
X	EXISTING C.L. FENCE
	EXISTING W.I. FENCE
	EASEMENT (TYPE PER PLAN)
AC	ASPHALT CONCRETE
AP	ANGLE POINT
AT	AERIAL TARGET
BC	BEGIN CURVE
BEG	BEGINNING
BLD/BLDG.	BUILDING
BM	BENCHMARK
BW	BACK OF WALK
BX	BOTTOM X
CHSL	CHISEL
CL	CENTER LINE
CONC	CONCRETE
COR	CORNER
CP	CONTROL POINT
DIA	DIAMETER
EC	END CURVE
EG	EDGE OF GUTTER
ELECT	ELECTRIC
EP	EDGE OF PAVEMENT
FF	FINISH FLOOR
FG	FINISH GRADE
FL	FLOWLINE
FNC	FENCE
FS	FINISH SURFACE
GI	GRATE INLET
GT	GATE
ICB	IRRIGATION CONTROL BOX
IN	INCH
INV	INVERT
IRR	IRRIGATION
MON	MONUMENT
N/E	NORTH EAST
N/W	NORTH WEST
PED	PEDESTAL
PLL	PARALLEL
POL	POINT ON LINE
S/E	SOUTH EAST
S/W	SOUTH WEST
SD	STORM DRAIN
SL	STREET LIGHT
SN	SIGN
SW	SIDEWALK
TC	TOP OF CURB
TR	TREE
VZN	VERIZON
TX	TOP X
WM	WATER METER
WV	WATER VALVE
	PCC
	LANDSCAPED AREA
	AC

TOPOGRAPHIC SITEPLAN
FOR
HUENEME HIGH SCHOOL
OXNARD, CA

SHEET 1 OF 6

PREPARED BY:
Armstrong & Brooks Consulting Engineers, Inc.
Civil Engineering · Water Resources · Surveying
1350 E. Chase Drive. Corona, CA 92881
Mail: P.O. Box 78088, Corona, CA 92887
Ph. (951) 372-8400, Fax (951) 372-8430

I:\JOBS\119\1692 HUENEME HS\CAD\XREF\1692-TOPO.DWG 10/14/19



40 0 40 80

SCALE 1" = 40'

TOPOGRAPHIC SITEPLAN

FOR

HUENEME HIGH SCHOOL

OXNARD, CA

SHEET 2

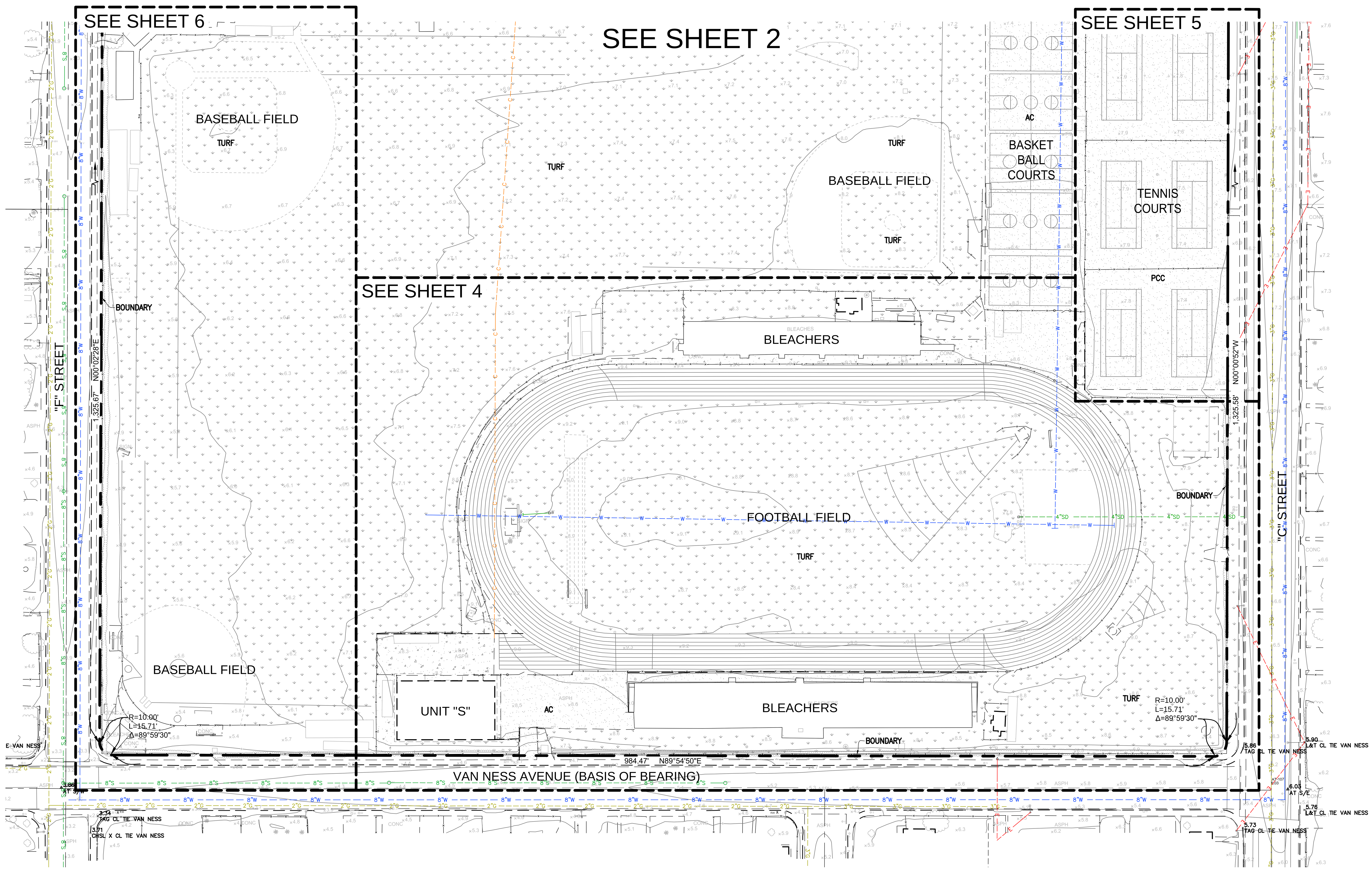
OF 6

PREPARED BY:

Armstrong & Brooks Consulting Engineers, Inc.

Civil Engineering · Water Resources · Surveying

1350 E. Chase Drive. Corona, CA 92881
Mail: P.O. Box 78088, Corona, CA 92887
Ph. (951) 372-8400, Fax (951) 372-8430



40 0 40 80

SCALE 1" = 40'

TOPOGRAPHIC SITEPLAN
FOR
HUENEME HIGH SCHOOL
OXNARD, CA

SHEET 3 OF 6

PREPARED BY:

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FOOTBALL FIELD

BLEACHES
BLEACHERS

TENNIS
COURTS
(SEE SHEET 5)

"C" STREET

UNIT "S"

ASPH

SEE DETAIL NO. 1
(BELOW)

BLEACHERS

VAN NESS AVENUE

5.86
TAG

DETAIL NO. 1 (SEE ABOVE)
1"=10'

SCALE 1" = 20'

TOPOGRAPHIC SITEPLAN

FOR
HUENEME HIGH SCHOOL
OXNARD, CA

SHEET 4
OF 6

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SEE SHEET 6

SEE DETAIL NO. 3 (BELOW)

SEE DETAIL NO. 2 (RIGHT)

DETAIL NO. 2 (SEE LEFT)
1"=10'

DETAIL NO. 3 (SEE ABOVE)
1"=10'

FOOTBALL FIELD & TRACK (SEE SHEET 4)

FOOTBALL FIELD & TRACK (SEE SHEET 4)

BASKET BALL COURTS

TENNIS COURTS

"C" STREET

15' CITY OF OXNARD WATER ESMT. PER BOOK INST. NO. 20171030-0017850

SCALE 1" = 20'

TOPOGRAPHIC SITEPLAN

FOR

HUENEME HIGH SCHOOL

OXNARD, CA

SHEET 5

OF 6

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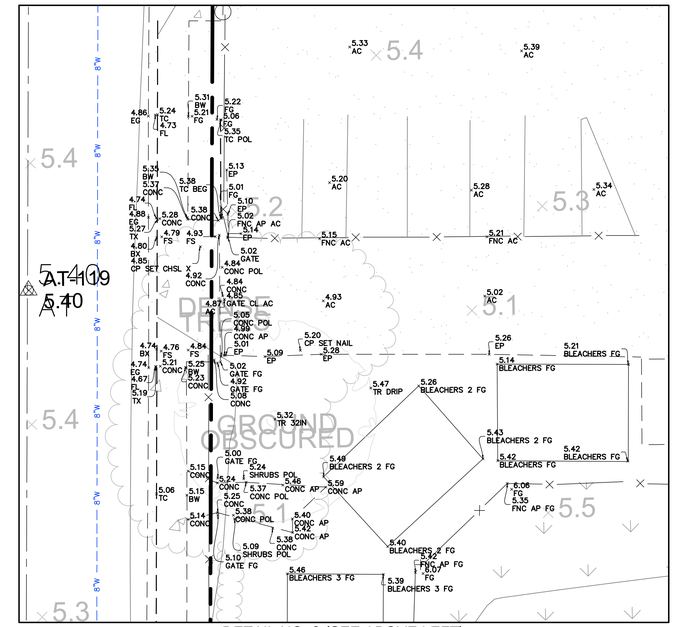
SEE SHEET 5

SEE DETAIL NO. 4
(BELOW RIGHT)

SEE BELOW LEFT

FOOTBALL FIELD & TRACK
(SEE SHEET 4)

SEE ABOVE RIGHT



DETAIL NO. 2 (SEE ABOVE LEFT)
1"=10'

SCALE 1" = 20'

TOPOGRAPHIC SITEPLAN

FOR

HUENEME HIGH SCHOOL

OXNARD, CA

SHEET 6

OF 6

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SECTION 00 01 10

TABLE OF CONTENTS

END OF SECTION

SECTION 01 10 00
SUMMARY

PART 1 GENERAL

1.01 PROJECT

A. Project Name: Hueneme HS Track & Field Improvements.

B. District's Name: Oxnard Union High School District.

C. Architect's Name: Little Diversified Architectural Consulting.

D. The Project consists of the alteration of athletic fields located at Hueneme High School.

1.02 CONTRACT DESCRIPTION

A. Contract Type: A single prime contract based on a Stipulated Price as described in Owner-Contractor Agreement.

B. The Work: The Work is construction and related services for a , CBC, Occupancy Type Assembly Group A-2 and Educational Group E, Construction Type V-B, , totaling approximately 1 square feet.

1. The Work includes new related site improvements; with patch and repair as required, and other features to the extent indicated on the Drawings.
2. New ADA compliant path of travel walkway to visitor side bleachers from stadium entrance.
3. New storm drainage system at synthetic field area.
4. New storm drainage system at edge(s) of synthetic track/field areas.
5. Provide perimeter improvements for fencing and gates as required.
6. Provide for athletic in ground field equipment.
7. Synthetic turf **system and** sub-drainage system.
8. Synthetic turf and track are provided under the CMAS contracting method and will be installed by the representative vendors. Contractor is to prepare the substrate and coordinate with the District's vendors for a complete installation and bid.
9. **Note: Some improvements are located outside the running track.**

1.03 CONTRACT DOCUMENTS

A. Contract Requirements:

1. Conditions of the Contract and other Contract documents have been included in the Project Manual, as indicated in the Table of Contents.
   a. Such documents are not Specifications.
2. Specifications are found in Divisions 01 through 33 of the Project Manual.

B. Contract Drawings: The Drawings provided with and identified in the Project Manual are the Drawings referenced in the Agreement.

1. The location, extent and configuration of the required construction and improvements are shown and noted on Drawings.

a. The Drawings are referenced in the Agreement.
b. An index of Drawings is included in the set of Drawings.

2. Drawings are arranged into series according to design discipline. Such organization and all references to trades, subcontractor, specialty contractor or supplier shall not control the Contractor in dividing the Work among subcontractors or in establishing the extent of the Work to be performed by any trade.

3. Where the terms "as shown", "as indicated", "as noted", "as detailed", "as scheduled", or terms of like meaning, are used in the Drawings or Specifications, it shall be understood that reference is being made to the Drawings referenced in the Agreement.

4. Where reference to the word "plans" is made anywhere in Drawings, Specifications and related Contract Documents, it shall be understood to mean the Drawings referenced in the Agreement.

C. Contract Specifications: The Specifications provided in the Project Manual are the Specifications referenced in the Agreement.

1. Specifications are organized by Divisions and Sections in accordance with the recommended practices of the Construction Specifications Institute.
   a. Such organization shall not control the Contractor in dividing the Work among subcontractors or in establishing the extent of Work to be performed by any trade.

2. Specifications are included in the Project Manual, which may also include other Bidding and Contract Documents.
   a. Contents of the Project Manual are listed in Document 00 01 10 - Table of Contents, in the Project Manual.

1.04 DESCRIPTION OF ALTERATIONS WORK

A. Scope of demolition and removal work is indicated on drawings and specified in Section 02 41 00.

1. The intent of these drawings and specifications are the work of the alteration, rehabilitation, or reconstruction of this facility shall be submitted and approved by DSA before proceeding with the repair work. CAC Section 4-317.

B. Scope of alterations work is indicated on drawings.

C. Contractor shall remove and deliver the following to District prior to start of work:

1. Pole mounted Athletic Field /Stadium LED Light fixtures.

2. Pole mounted Athletic Field /Stadium Sound System.

1.05 WORK BY OWNER

A. District has awarded a contract for supply and installation of Synthetic turf and running track **by CMAS** which will commence on a schedule determined by the progress of the work.

B. Concurrent Work Under Separate Contracts:

1. Work Under Separate Contracts: District will award separate contracts for products and installation for interior improvements and other work as may be indicated on Drawings as NIC (Not in Contract).

2. Relationship to Work Under the Contract:

a. Work under the Contract shall include all provisions necessary to make such concurrent work under separate contracts complete in every respect and fully functional, including field finishing.
b. Provide necessary backing, supports, piping, conduit, conductors and other such provisions from point of service to point of connection, as shown on Drawings and specified herein.

3. Related Contract Documents:
a. District will make available, in a timely manner, drawings and specifications of work under separate contracts for coordination and further description of that work.
b. Such drawings and other data required for the coordination of the work of separate contracts with the Work of this Contract may be included with the Contract Documents.
c. If so, they are provided for convenience only and are not to be considered Contract Documents produced by Architect or Architect's consultants.

4. Permits, Notices and Fees:
a. Permits, Notices and Fees: Notices required by and approvals required of authorities having jurisdiction for work under separate contracts and related fees will be solely the responsibility of District.

C. Items noted NIC (Not in Contract) will be supplied and installed by District before Substantial Completion.

D. District will supply the following for installation by Contractor:

1. Owner-Furnished Products: District may furnish, for installation by Contractor, products which are identified on the Drawings and in the Specifications as OFCI (Owner-Furnished/Contractor-Installed).

2. Relationship to Work Under the Contract:
a. Work under the Contract shall include all provisions necessary to fully incorporate such products into the Work, including, as necessary:
1) Fasteners.
2) Backing,.
3) Supports.
4) Piping.
5) Conduit.
6) Conductors.
7) Other such provisions from point of service to point of connection.
8) Field finishing, as shown on Drawings and specified herein.
b. See Section 01 30 00 - Administrative Requirements for additional requirements.

1.06 PERMITS, LICENSES AND FEES

A. Permits:

1. For Work included in the Contract, Contractor shall obtain all permits from authorities having jurisdiction and from serving utility companies and agencies.

2. District will reimburse Contractor for amount charged for such permits, without mark-up.

3. For Work performed under design/build basis, plancheck and permit fees shall be included in the Contract Sum.

B. Licenses:

1. Contractor shall obtain and pay all licenses associated with construction activities, such as business licenses, contractors' licenses and vehicle and equipment licenses.
2. All costs for licenses shall be included in the Contract Sum.

C. Assessments:

1. District will pay all assessments and utility service connection fees. Costs of assessments shall not be included in the Contract Sum.

D. Test and Inspection Fees:

1. Contractor shall pay all fees charged by authorities having jurisdiction and from serving utility companies and agencies, for tests and inspections conducted by those authorities, companies and agencies.
2. District will reimburse Contractor for actual amount of such fees, without mark-up.
3. Refer to Section 01 40 00 - Quality Requirements for additional information on tests and inspections and responsibility for payment of fees.

1.07 OWNER OCCUPANCY

A. District intends to continue to occupy adjacent portions of the existing site during the entire construction period.

B. District intends to occupy the Project upon Substantial Completion.

C. Cooperate with District to minimize conflict and to facilitate District's operations.

D. Schedule the Work to accommodate District occupancy.

1.08 CONTRACTOR USE OF SITE AND PREMISES

A. Construction Operations: Limited to areas noted on Drawings.

B. Arrange use of site and premises to allow:

1. District occupancy.
2. Work by Others.
3. Work by District.
4. Use of site and premises by the public.

C. Provide access to and from site as required by law and by District:

1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
2. Site Access:
   a. Limit access to site to indicated routes and access points as indicated.
   b. If routes and access points are not indicated, access shall be as approved by District.
   c. Do not restrict access to adjacent properties and do not restrict access for those performing work under separate contracts for the District.

3. Do not obstruct roadways, sidewalks, or other public ways without permit.
4. Construction Limit:
    a. Limit construction activities to areas indicated on Drawings as Project Area or, if not indicated, to areas within the parcel as described in the legal description on the Drawings.
    b. Refer also to Section 01 50 00 - Temporary Construction Facilities and Controls for additional requirements.

D. Existing building spaces may not be used for storage.

E. Time Restrictions:
1. Limit conduct of especially noisy, malodorous, and dusty exterior work to the hours of 8 AM to 6 PM.

F. Utility Outages and Shutdown:
1. Limit disruption of utility services to hours the site is unoccupied.
2. Do not disrupt or shut down life safety systems, including but not limited to fire sprinklers and fire alarm system, without 7 days notice to District and authorities having jurisdiction.
3. Prevent accidental disruption of utility services to other facilities.

1.09 CONSTRUCTION WASTE MANAGEMENT

A. Construction and waste management, complying with Section 01 74 19 - Construction Waste Management and Disposal, is a requirement for this project.

B. The Contractor, Prime Contractors, and subcontractors all have obligations in meeting the requirements of this specification.

END OF SECTION

SECTION 26 05 05

SELECTIVE DEMOLITION FOR ELECTRICAL

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Electrical demolition.

B. Removal of existing pole mounted items at the athletic field.

1. Pole mounted Athletic Field /Stadium LED Light fixtures.

2. Pole mounted Athletic Field /Stadium Sound System.

1.02 RELATED REQUIREMENTS

A. Section 01 70 00 - Execution and Closeout Requirements: Additional requirements for alterations work.

1.03 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

PART 2 PRODUCTS

2.01 MATERIALS AND EQUIPMENT

A. Materials and equipment for patching and extending work: As specified in individual sections.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify field measurements and circuiting arrangements are as indicated.

B. Verify that abandoned wiring and equipment serve only abandoned facilities.

C. Demolition drawings are based on casual field observation and existing record documents.

D. Report discrepancies to Architect before disturbing existing installation.

E. Beginning of demolition means installer accepts existing conditions.

3.02 PREPARATION

A. Disconnect electrical systems in walls, floors, and ceilings to be removed.

B. Coordinate utility service outages with utility company.

C. Provide temporary wiring and connections to maintain existing systems in service during construction. When work must be performed on energized equipment or circuits, use personnel experienced in such operations.

D. Existing Electrical Service: Maintain existing system in service until new system is complete and ready for service. Disable system only to make switchovers and connections. Minimize outage duration.

1. Obtain permission from District at least 24 hours before partially or completely disabling system.
2. Make temporary connections to maintain service in areas adjacent to work area.

E. Existing Fire Alarm System: Maintain existing system in service until new system is accepted. Disable system only to make switchovers and connections. Minimize outage duration.
1. Notify District before partially or completely disabling system.
2. Notify local fire service.
3. Make notifications at least 24 hours in advance.
4. Make temporary connections to maintain service in areas adjacent to work area.

F. Existing Telephone System: Maintain existing system in service until new system is complete and ready for service. Disable system only to make switchovers and connections. Minimize outage duration.
1. Notify District at least 24 hours before partially or completely disabling system.
2. Notify telephone utility company at least 24 hours before partially or completely disabling system.
3. Make temporary connections to maintain service in areas adjacent to work area.

3.03 DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK

A. Perform work for removal and disposal of equipment and materials containing toxic substances regulated under the Federal Toxic Substances Control Act (TSCA) in accordance with applicable federal, state, and local regulations. Applicable equipment and materials include, but are not limited to:
1. Mercury-containing lamps and tubes, including fluorescent lamps, high intensity discharge (HID), arc lamps, ultra-violet, high pressure sodium, mercury vapor, ignitron tubes, neon, and incandescent.

B. Remove, relocate, and extend existing installations to accommodate new construction.

C. Remove abandoned wiring to source of supply.

D. Remove exposed abandoned conduit, including abandoned conduit above accessible ceiling finishes. Cut conduit flush with walls and floors, and patch surfaces.

E. Disconnect abandoned outlets and remove devices. Remove abandoned outlets if conduit servicing them is abandoned and removed. Provide blank cover for abandoned outlets that are not removed.

F. Disconnect and remove abandoned panelboards and distribution equipment.

G. Disconnect and remove electrical devices and equipment serving utilization equipment that has been removed.

H. Disconnect and remove abandoned luminaires. Remove brackets, stems, hangers, and other accessories.

I. Repair adjacent construction and finishes damaged during demolition and extension work.

J. Maintain access to existing electrical installations that remain active. Modify installation or provide access panel as appropriate.

K. Extend existing installations using materials and methods compatible with existing electrical installations, or as specified.

3.04 CLEANING AND REPAIR

A. See Section 01 74 19 - Construction Waste Management and Disposal for additional requirements.

B. Clean and repair existing materials and equipment that remain or that are to be reused.

C. Panelboards: Clean exposed surfaces and check tightness of electrical connections. Replace damaged circuit breakers and provide closure plates for vacant positions. Provide typed circuit directory showing revised circuiting arrangement.

D. Luminaires: Remove existing luminaires for cleaning. Use mild detergent to clean all exterior and interior surfaces; rinse with clean water and wipe dry. Replace lamps, ballasts and broken electrical parts.

END OF SECTION

SECTION 32 18 13

SYNTHETIC GRASS SURFACING

PART 1 GENERAL

1.01 SUMMARY

A. The District will contract with an independent vendor (CMAS) to ~~install~~**supply** the synthetic turf surface. This section is provided for reference purposes of the SIte Contractor.

1. Aggregate base and drainage is the responsibility of the Overall Site Contractor.

B. It shall be the responsibility of the successful synthetic turf contractor (District's CMAS Vendor) to provide all labor, materials, equipment and tools necessary for the complete installation of the synthetic grass turf field as indicated on the plans and as specified herein~~.~~**, on to the base provided by the Site Contractor.** The installation of all materials shall be performed in strict accordance with the manufacturer's installation instructions and in accordance with all approved shop drawings.

C. Site Contractor to furnish all labor, materials, tools and equipment necessary to install synthetic turf as indicated on the Drawings and as specified herein; including components and accessories required for a complete installation. including but not limited to:

1. Acceptance of prepared sub-base.
2. Coordination with related trades to ensure a complete, integrated, and timely installation
    a. Coordination with aggregate base course, sub-base material (tested for permeability), grading and compacting, piping, and drainage components; as provided under respective section(s).

D. Perimeter edge details required for the system shall be as detailed and recommended by the turf manufacturer, and as approved by the District.

1. Supply and installation of these details will be under the scope of work of the base contractor, not that of the artificial grass field turf Installer.

1.02 SECTION INCLUDES

A. Synthetic grass surfacing and infill.

B. Edge anchoring and borders.

C. Shock absorbing course.

D. Correction of grades and subgrade.

E. Field graphics.

1.03 RELATED REQUIREMENTS

A. Section 03 30 00 - Cast-in-Place Concrete.

B. Section 11 68 33 - Athletic Field Equipment.

C. Section 11 68 33.43 - Track and Field Equipment.

D. Section 11 68 93 - Synthetic Turf Maintenance Equipment.

E. Section 31 10 00 - Site Clearing.

F. Section 31 23 16 - Excavation.

G. Section 31 23 16.13 - Trenching.

H. Section 31 23 23 - Fill.

I. Section 31 22 10 - Fine Grading For Synthetic Turf Surfacing.

J. Section 32 11 23.33 - Aggregate Base Course for Synthetic Track Surface.

K. Section 32 11 23.43 - Aggregate Base Course for Synthetic Turf.

L. Section 321613.50 - Concrete Curbs and Flatwork at Track.

M. Section 32 31 13 - Chain Link Fences and Gates.

N. Section 33 42 11 - Stormwater Gravity Piping.

~~O. Section 33 46 50 - Athletic Field Subdrainage System.~~

~~**1.04 PRICE AND PAYMENT PROCEDURES**~~

~~A. Allowances: See Section 01 21 00 - Allowances, for cash allowances affecting this section.~~

~~1.05~~1.04 REFERENCE STANDARDS

A. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018.

B. ASTM C136/C136M - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates; 2014.

C. ASTM D698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3 (600 kN-m/m3)); 2012, with Editorial Revision (2015).

D. ASTM D1335 - Standard Test Method for Tuft Bind of Pile Yarn Floor Coverings; 2017, with Editorial Revision (2018).

E. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft3 (2,700 kN m/m3)); 2012, with Editorial Revision (2015).

F. ASTM D2859 - Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials; 2016.

G. ASTM D5823 - Standard Test Method for Tuft Height of Pile Floor Coverings; 2013.

H. ASTM D6662 - Standard Specification for Polyolefin-Based Plastic Lumber Decking Boards; 2017.

I. ASTM F1292 - Standard Specification for Impact Attenuation of Surfacing Materials Within the Use Zone of Playground Equipment; 2017.

J. ASTM F1487 - Standard Consumer Safety Performance Specification for Playground Equipment for Public Use; 2017.

K. ASTM F1632 - Standard Test Method for Particle Size Analysis and Sand Shape Grading of Golf Course Putting Green and Sports Field Rootzone Mixes; 2003 (Reapproved 2018).

L. ASTM F1667 - Standard Specification for Driven Fasteners: Nails, Spikes, and Staples; 2018a.

M. ASTM F1936 - Standard Specification for Impact Attenuation of Turf Playing Systems as Measured in the Field; 2010 (Reapproved 2015).

N. ASTM F2765 - Standard Specification for Total Lead Content in Synthetic Turf Fibers; 2014.

O. ASTM F2898 - Standard Test Method for Permeability of Synthetic Turf Sports Field Base Stone and Surface System by Non-confined Area Flood Test Method; 2011.

P. ASTM STP322-1 - Field Testing of Soils, Chapter 1: Field Percolation Tests for Sanitary Engineering Application; 1962.

Q. CPSC Pub. No. 325 - Public Playground Safety Handbook; 2010.

R. NFHS (Guide) - Court and Field Diagram Guide; current edition.

1.~~06~~05 ADMINISTRATIVE REQUIREMENTS

A. See Section 01 30 00 - Administrative Requirements - Administrative Requirements, for project meetings.

B. Preinstallation Meeting: Conduct a preinstallation meeting at least one week prior to the start of the work of this section; require attendance by all affected installers.

C. Sequencing: Ensure that utility connections are achieved in an orderly and expeditious manner.

1.~~07~~06 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

B. Product Data: For all manufactured surfacing products, provide manufacturer's product data showing materials of construction, compliance with specified standards, installation procedures, and safety limitations.

1. Include STC and IPEMA certifications where required.
2. Treated Wood Products: Provide information on wood treatment chemical content, toxicity level, and life-cycle durability.

C. Shop Drawings: Carpet Roll: Show locations of seams and methods of seaming.

1. Field Graphics: Include methods of seaming.

D. Samples: For each product for which color must be selected provide color chart showing full range of colors.

E. Samples: Provide the following prior to ordering material:

1. Synthetic Grass carpet: Two 12 inch by 12 inch (305 mm by 305 mm) pieces.
2. Infill material: Two 1 gallon bags for each type.
3. Seamed synthetic grass carpet: Two 12 inch by 24 inch (305 mm by 610 mm) pieces seemed together for each seaming method indicated on drawings.
4. Shock absorbing material: two 1 gallon bags for each type.
5. Field graphics synthetic grass carpet: Two 12 inch by 12 inch (305 mm by 305 mm) pieces for each color indicated on drawings.

F. Percolation Test Report: Describing test method used and results.

G. Manufacturer's Qualification Statement.

H. Installer's Qualification Statement.

I. Maintenance Data:

1. For manufactured surfacing products, provide manufacturer's recommended maintenance instructions and list of repair products, with address and phone number of source of supply.
2. For loose fill surfacing products, provide detailed re-ordering information to enable District to match installed material exactly.

J. Manufacturer's Field Report.

K. Topographical survey of loose fill layer prior to installation of synthetic grass carpet.

L. Certification: Provide IPEMA certification of ASTM F1292 Critical Fall Height at thickness specified.

1.~~08~~07 QUALITY ASSURANCE

A. See section 01 40 00 - Quality Requirements, for procedures for testing, inspection, mock-ups, reports, certificates, use of reference standards.

B. Maintain one copy of the latest edition of ASTM F1487 and CPSC Pub. No. 325 at project site.

C. Manufacturer Qualifications: Company regularly engaged in manufacturing products specified in this section, with not less than three years of documented experience.
1. Surfacing installed in minimum 10 sites and been in successful service minimum 5 years.
2. Manufacturer's Representative: Provide name, company name and address, and qualifications.

D. Installer Qualifications: Company certified by manufacturer for training and experience installing the protective surfacing; provide installer's company name and address, and training and experience certificate.
1. Installers of the subsurface drainage base system for the fields shall be required to comply with and supply proof/references to the District 10 days prior to the bid the following information:
   a. General Contractor constructing the drainage base system must have an installation team possessing a Class A California Engineering Contractor's License.
   b. Have prior direct experience in preparing a minimum of 10 drainage base sub-surface systems for synthetic turf sports fields as is proposed for this project and must have installed a minimum of 10 synthetic turf field projects the past 3 years in California.

1.~~09~~08 DELIVERY, STORAGE, AND HANDLING

A. Deliver, handle, and store synthetic grass surfacing to project site in accordance with manufacturer's recommendations.

B. Store materials in a dry, covered area, elevated above grade.

1.~~10~~09 FIELD CONDITIONS

A. Ambient Conditions: Work under this section will cease when:
1. Temperatures are below 55 degrees F.
2. Humidity levels are above the adhesive manufacturer's requirements.
3. Rain is imminent or falling.

4. Surfaces are wet or damp.

1.~~11~~10 WARRANTY

A. See Section 01 78 00 - Closeout Submittals - Closeout Submittals, for additional warranty requirements.

B. Provide 10 year minimum warranty from the date of substantial completion for materials and installation covering:

1. Excessive wear.
2. Fiber tensile strength.
3. Deterioration or fading from UV light.
4. Seam integrity.
5. Shock absorption.

PART 2 PRODUCTS

2.01 REGULATORY REQUIREMENTS

A. Provide surfacing meeting the requirements for the physically disabled of the California Code of Regulations (CCR), Title 24, Part 2, and ADA Accessibility Guidelines for Buildings and Facilities, as amended.

1. Surfacing shall be stable, firm, and slip resistant and shall comply with CBC Sections 11B-302 and 11B-403.
2. Surfacing shall have accessible points of entry and use.

2.02 SYNTHETIC GRASS SURFACING

A. CMAS Provided Product: FieldTurf Elite FT-CORE 2.5” CoolPlay synthetic turf as manufactured by FieldTurf, a Tarkett Sports Company.

B. CMAS Provided Synthetic Grass Carpet: Yarn fibers tufted through and adhered to a porous fiber backing.

1. Primary Blades:
   a. Fibers: Monofilament.
   b. Material: Polyethylene.
   c. Weight: 40 ounces per square yard (1.4 l/sm).
   d. Height: 2-1/2 inch (64 mm), in compliance with 1.
   e. Tuft Bind: 8 pounds-force, minimum, in compliance with ASTM D1335.
2. Backing:
   a. First: Dual layer of woven polyester treated with UV inhibitors.
   b. Second: Coating of polyurethane.
   c. Backing Weight: 20 ounces per square meter.
3. Face Weight: Minimum 40 ounces per square yard.
4. Permeability: 40 inches (1016 mm) of water per hour, minimum.
5. Lead Content: 100 ppm, maximum, in compliance with ASTM F2765.

6. Roll: 15 feet (4.6 m) feet wide, minimum.
    a. Rolls shall be long enough to go from field sideline to sideline.
    b. Where the playing field is for football, the perimeter white line shall be tufted into the individual sideline rolls.
7. Noncombustible: Pass ASTM D2859 for flammability.
8. Field Graphics:
    a. Inlaid Marking: Synthetic grass of the same manufacturer in colors indicated on drawings.

C. Synthetic Grass Infill: 2 pounds per square foot (10 ksm), minimum at 50-50 percent rubber granule to synthetic sand:
1. CMAS Provided Product: FieldTurf CoolPlay Heat Reduction Infill as manufactured by FieldTurf, a Tarkett Sports Company.
2. Rubber granule: EPDM, 10-20 mesh, free of metals, nonmetal fibers, and contaminants.
    a. Infill shall consist of a resilient layered granular system, comprising selected and graded sand and cryogenically hammer-milled SBR rubber crumb with a top layer of the extruded CoolPlay composite.
    b. Artificial Grass products without cryogenically processed SBR rubber and a top layer of the extruded CoolPlay composite will not be acceptable.
    c. CoolPlay composite must have a bulk density of 0.55 g/cm3 +/- 15% and a specific gravity of greater than 1.
3. Sand: Silica, 20-30 mesh, free of silts, clays, and contaminants, roundness of subangular, minimum, per ~~ASTM F1632.~~**1.**
    a. Average Particle shape > 0.4 on the Krumbein scale.
    b. Particle structure predominantly single grain.
    c. Produce < 0.4%, -50M in API crush test at 80 psig.

D. Meet California's Prop 65. Ensure the material has been tested to key local standards.

E. Shock Absorbing Course:
1. Recycled Rubber Fill: Loose fill; 100 percent recycled rubber chips, shreds, granules, or nuggets; installed over subgrade.
    a. Chip Size: 3/8 inch.
    b. Depth: As indicated on drawings.
2. Impact Mats:
    a. In Situ Cushion: Shredded rubber bonded with polyurethane adhesive, allowing water penetration, over aggregate subbase.
        1) Rubber: 100 percent recycled shredded styrene butadiene rubber (SBR) shreds or granules.
        2) Depth: As indicated on drawings.

2.03 MATERIALS

A. Edge Anchoring: Wood-polymer composite lumber complying with ASTM D6662; factory finished, free of sharp vertical edges, protruding elements, and trip hazards, capable of being secured to the border.

1. Size(s): 2 inch by 3 inch (51 mm by 76mm).
2. Minimum Edge Radius: 1/2 inch.

B. Border: Permanent element surrounding edge anchoring, consisting of exterior walls:
1. Sidewalks: As indicated on drawings.
2. Rubber Curb: 6 inch wide by 6 inch deep (152 mm by 152 mm).
3. Chain Link Fence: As indicated on drawings.

C. Drainage (Base Stone) Course: Fractured, non-rounded gravel; washed; free of dust, clay, dirt, organic material, hazardous substances, or foreign objects; rounded particles, either naturally or mechanically; sieved in compliance with ASTM C136/C136M in the specified gradation range.
1. Percent Passing Sieve Size 1-1/2 inch: 100 percent.
2. Percent Passing Sieve Size 3/4 inch: 75 to 85 percent.
3. Percent Passing Sieve Size 1/2 inch: 40 to 70 percent.
4. Percent Passing Sieve Size 3/8 inch: 75 to 85 percent.
5. Percent Passing Sieve Size No. 4: 0 percent.
6. Depth: As indicated on drawings.

D. Drainage Pipes: Uniform material, free of defects:
~~1~~**1. Material: As indicated on drawings.**
2. Shape: As indicated on drawings.
3. Perforations: As indicated on drawings.
~~2~~**4**. Size: As indicated on drawings.

E. Geotextile Fabric: Nonwoven Needle punched polyester sheet composed of recycled polyester resins.

2.04 ACCESSORIES

A. Fasteners, Synthetic Grass to Edging: 1/2 inch (13 mm) stainless steel staples, in compliance with ASTM F1667.

B. Fasteners, Edging to Border: Self drilling, stainless steel screws, in compliance with ASTM F1667.

C. Fasteners, Seams:
1. Sewing Thread: As recommended by manufacturer.
2. Bonding:
a. Adhesive: One-part urethane based glue.
b. Backing: 12 inch (305 mm) wide woven polyester fabric.

D. Rebar: Number 4 rod.

E. Joint Sealant: As recommended by curbing manufacturer, in compliance with ASTM C920.

F. Field Groomer and Sweeper as part of the Work.
1. CMAS Provided Product: GroomRight, (800)-724-2969 as manufactured by FieldTurf, a Tarkett Sports Company.

a. Field groomer to include a towing mechanism compatible with a field utility tow vehicle.

2. CMAS Provided Product: SweepRight, (800)-724-2969 as manufactured by FieldTurf, a Tarkett Sports Company.
   a. Field sweeper to include a towing mechanism compatible with a field utility tow vehicle.

2.05 SOURCE QUALITY CONTROL

A. See Section 01 40 00 - Quality Requirements, for additional requirements.

B. Supply individual components from a single source.

PART 3 EXECUTION

3.01 PREPARATION

A. Lay out entire project perimeter as indicated on drawings prior to starting work.

B. Measure the location of all synthetic grass elements, including perimeter of existing synthetic grass surfacing, access and egress points, hard surfaces, walls, fences, and structures.

C. Verify location of underground utilities and facilities in the project area. Damage to underground utilities and facilities will be repaired at Contractor's expense.

3.02 SUBGRADE

A. Excavate unsuitable soils as specified in Section 31 23 16. Backfill with suitable material as specified in Section 31 23 23.

B. Correct irregularities to ensure that required depth of drainage layer can be installed, and elevation is in accordance with manufacturer's requirements.

C. Remove all obstructions that extend into the drainage layer within the composite nailer boards.

D. Perform rough and finish grading as specified in Section 31 22 00.

E. Shape to profile indicated on drawings and compact by proof rolling to a minimum 95 percent, in compliance with ASTM D698.

F. Flatness Tolerance: 1/2 inch in 10 feet, maximum.

G. Perform percolation test at the lowest elevation of the subgrade, in compliance with ASTM STP322-1.

   1. Report results to Architect.

   2. If percolation is less than 1 inch in a 3 hour period, do not proceed.

H. Verify that subgrades are at proper elevations and that smooth grading is complete.

3.03 TRENCHING AND BACKFILLING

A. Lay out trenching for entire drainage network prior to excavation, as indicated on drawings.

B. Excavate trenches in accordance with drawings.

C. Mirror base of trenches to finish grade.

D. Open trenches require the presence of daily site activity.

E. Repair any deviations from plans after drainage pipe installation and prior to installing geotextile fabric.

F. Perform trenching as specified in Section 31 23 16.13.

3.04 DRAINAGE PIPE

A. Install all piping and fittings as indicated on drawings.

B. Install collector lines prior to laterals with deepest excavations first.

C. Connect collector lines to discharge outlet prior to field use.

D. Completion of installation in accordance to design requires approval by Architect.

E. Install drainage pipe as specified in Section 33 42 11.

3.05 GEOTEXTILE FABRIC

A. Verify that subgrade is free of ruts or protruding objects.

B. Install geotextile fabric over subgrade in in drainage trenches first, prior to field installation.

C. Lap minimum 36 inches width at seams. Adhere seams in accordance with manufacturer's recommendations.

D. Install fabric smooth, and free of tensile stresses, folds, or wrinkles.

E. Protect fabric from clogging, tears, or other damage during surfacing installation.

F. Repair or replace damaged fabric in accordance with manufacturer's recommendations.

3.06 DRAINAGE AGGREGATE

A. Loose Fill Surfacing:

1. Install in compliance with CPSC Pub. No. 325, ASTM F1487, and requirements of authorities having jurisdiction (AHJ).
2. Install aggregate subbase as indicated on drawings. Compact aggregate to maximum 95 percent, in compliance with 1.
3. Compact to minimum 95 percent density, in compliance with ASTM D698.
4. Flatness Tolerance: 1/4 inch in 10 feet, maximum.
5. Correct high and low areas in accordance with design drawings.
6. Match top of layer with top of edge anchoring.
7. Prevent base stone from entering into loose fill surfacing layer. Prevent loose fill from entering into base stone layer.

B. Base Stone:

1. Install aggregate subbase as indicated on drawings and in Section 32 11 23. Compact aggregate to maximum 95 percent, in compliance with ASTM D1557.
2. Install in compliance with CPSC Pub. No. 325, ASTM F1487, and requirements of authorities having jurisdiction (AHJ).
3. Compact to minimum 95 percent density, in compliance with ASTM D698.
4. Flatness Tolerance: 1/2 inch in 10 feet, maximum.
5. Correct high and low areas in accordance with design drawings.

6. Mirror base stone elevations to final elevations.
7. Prevent disturbance to geotextile fabric during installation.
8. Approval of drainage piping by Architect required prior to commencement of installation. Prevent disturbance of drainage piping during installation.

3.07 SHOCK ABSORBING COURSE

A. Recycled Rubber Fill:
   1. Install to thickness meeting critical fall heights, as determined by ASTM F1292, or according to drawings.
   2. Install in a smooth level manner without depressions or rises.
   3. Compact until adult foot depressions do not occur.

B. Impact Mats:
   1. In Situ Cushion:
      a. Mix SBR and adhesive mechanically on-site in accordance with manufacturer's directions; do not mix by hand.
      b. Install in a continuous bond; ensure complete bond to subbase.
      c. Maintain full thickness of resilient layers within Use Zone; cover or abut containment curbs as indicated on drawings; completely cover tapered transition edges.
      d. Hand trowel exposed surface to smooth, even finish.
      e. Impact Attenuation Layer: Install entire layer in one continuous pour on the same day.

3.08 EDGE ANCHORING

A. Layout composite nailer boards. Approval of locations by Architect required prior to installing.
B. Install along full perimeter of synthetic grass.
C. Fasten to border with case hardened screws at 24 inch on center, minimum.
D. Set top of edging flush or recessed 1/2 inch below top of border, maximum.

3.09 BORDER

A. Verify that site furnishings and composite nailer boards located within project area are complete.
B. Install border sidewalks according to design drawings.
C. Sidewalks: Match to top elevation or increase by 1/2 inch above edge anchoring, maximum. Install cast-in-place sidewalks as specified in Section 03 30 00.
D. Rubber Curb: Install rubber curb in retrofit projects with a perimeter fence separating synthetic grass from adjacent areas. Elevate curb 1-1/2 inch higher than outside soil surfaces. Slope top surface outward from synthetic grass. Install four rebar anchors to each 8 feet length, recessed 1-1/2 inch from top of curb.
E. Chain Link Fence: Align centerlines of fence and curb. Apply grout to each curb hole installed with fence post, securing post in place. Install chain link fences and gates as specified in Section 32 31 13.

3.10 SYNETHETIC GRASS

A. Carpet Rolls:

1. Unroll all carpet in the same direction.
2. Prevent seams from being located over impact mats.
3. Allow carpet to rest for at least 4 hours after unrolling and prior to seaming.
4. Smooth seams and edges, eliminate overlaps and gaps.

B. Seaming:

1. Cut: Straight, with a clean and smooth edge.
2. Method:
   a. Sewing: 2 thread, bound seam stitch.
   b. Bonding: adhesive-backed, applied uniformly with complete coverage.

C. Securing: Staple carpet to edging 1 inch (25 mm) on center.

D. Field Graphics:

1. District is to provide Turf Manufacturer (District's CMAS Vendor), through the Architect, with final electronic versions of artwork and all Pantone Matching System color codes at least two (2) months in advance of field installation commencement.
2. Applied Marking: Per manufacturer recommendations, in dimensions and color patterns indicated on drawings.
3. Inlaid Marking:
   a. Shearing: Cut the synthetic grass through the backing, in dimensions and pattern indicated on drawings.
   b. Inlay: Bond synthetic grass in colors indicated on drawings within sheared patterns.

3.11 LINES AND MARKINGS

A. Provide a complete field lining, marking and field boundary system with team area limits, etc., with the initial installation of the surfacing system. Accurately survey layouts and mark prior to installation.

B. Tolerances: Do not deviate more than 1/4 inch from the dimensions shown on the plans.

C. All lines and graphics shall be tufted or sewn into the synthetic turf panels.

Football:

Typical Lines:	4 inch wide white lines, sewn.
Sideline Boundary:	24 inch wide white lines, sewn.
Goal Line:	8 inch wide white lines, sewn.
1 Yard Line Numerals:	72 inch tall, white, sewn.
Directional Arrow:	36 by 18 inches triangle, white, sewn.
Hash Marks and Inbound Lines:	4 inch wide, 24 inch long, sewn. 53'-4" from sideline per ~~NFHS (Guide).~~ **1.**
Extra Point Line:	4 inch wide, 48 inch long, sewn.
Kick-Off Marking:	4 inch wide by 24 inch white lines, sewn.
Mid-Field Graphics:	Color graphic, sewn, graphic to supersede field lines.

End Zone Graphics:	Distinct solid field color Color graphic or letters, sewn, graphic to supersede field lines.
Spectator Zone Marking:	4 inch wide broken white line and 48 inch long with a space of 24 inch intervals

1. Team/Player Box: Back edge of team/player box to extend to Soccer field boundary line when the two fields are overlaid.
2. Pylons: The four intersections of goal lines and sidelines must be marked at inside corners of the end zone and the goal line by pylons. Pylons must be placed at inside edges of white lines and should not touch the surface of the actual playing field itself.

Soccer:

Playing field boundaries:	4 inch wide yellow lines, sewn.
Mid-field line:	4 inch wide white line, sewn down the middle. 2 inch wide yellow line, tufted on each side of the white line.
Goal and penalty boxes:	4 inch wide yellow lines, sewn.
Center circle & penalty arc:	4 inch wide yellow lines, sewn.
Corner kick arc:	4 inch wide yellow lines, sewn.
Corner kick hash marks:	4 inch wide by 36 inch white lines, sewn.
Center spot:	9 inch diameter white dot, sewn. Center spot to supersede graphics. Confirm with Architect after mid-field graphics are available.
Team box:	4 inch wide white lines, sewn.
Turf perimeter at conc. curb:	12 inch wide yellow lines, sewn.

Modified Soccer (Cross Courts):

Playing field boundaries	4 inch wide "Nike Green" lines, sewn.
Goal and penalty boxes:	4 inch wide "Nike Green" lines, sewn.
Corner kick arc:	4 inch wide "Nike Green" lines, sewn.

3.12 INFILL

A. Apply during dry weather without signs of moisture on synthetic grass.

B. Thoroughly brush synthetic grass prior to infill installation.

C. Apply infill uniformly in multiple lifts, brush fibers between each application.

D. Measure depth to confirm accordance with plans.

3.13 FIELD QUALITY CONTROL

A. See Section 01 40 00 - Quality Requirements, for additional requirements.

B. Drainage aggregate completion requires approval by Architect.

C. District or District's representative will inspect synthetic grass after installation to verify that surfacing is of proper type and meets specified design safety and accessibility requirements.

D. Repair or replace rejected work until compliant with specified requirements and design criteria.

E. Confirm rainfall permeability meets design, per ASTM F2898.

F. Confirm impact attenuation meets design, per ASTM F1936.

G. Replace damaged products before Date of Substantial Completion.

3.14 CLEANING

A. Clean surrounding areas of excess construction materials, debris, and waste.

B. Remove excess and waste material and dispose of off-site in accordance with requirements of authorities having jurisdiction.

C. See Section 01 74 19 - Construction Waste Management and Disposal, for additional requirements.

3.15 CLOSEOUT ACTIVITIES

A. See Section 01 78 00 - Closeout Submittals, for closeout submittals.

B. See Section 01 79 00 - Demonstration and Training, for additional requirements.

C. Demonstration: Demonstrate operation of system to District's personnel.

1. Use operation and maintenance data as reference during demonstration.
2. Conduct walking tour of project.
3. Briefly describe function, operation, and maintenance of each component.

D. Training: Train up to eight District's personnel on operation and maintenance of system.

1. Use operation and maintenance manual as training reference, supplemented with additional training materials as required.
2. Provide minimum of two hours of training.
3. Location: At project site.

3.16 PROTECTION

A. Protect installed products until Date of Substantial Completion.

B. Restore adjacent existing areas that have been damaged by work of this section.

END OF SECTION

SECTION 32 18 23.39

SYNTHETIC RUNNING TRACK SURFACING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Synthetic running track surfaces.

B. Line markings.

C. This Section is provided as reference for the Site Contractor, This system is District Furnished and District **Assigned** Vendor Installed ~~(OFOI~~**through the Contractor (OFCI**).

1. The synthetic surfacing contractor shall furnish all labor, materials, equipment, supervision and services necessary for the proper completion of the BSS 300 Synthetic Track Surfacing System and related work indicated on the drawings and specified herein.

2. The synthetic surfacing contractor shall refer to the drawings for the required locations of synthetic track surfacing to be installed. All quantities and dimensions shall be field verified by the synthetic surfacing contractor.

3. Specific Scope of Work

   a. Paved-in-place, all-weather synthetic track surface consisting of impermeable polyurethane bound rubber base mat and a solid pour polyurethane coating with broadcast rubber granules in a ~~light encapsulating~~**embedded** finish.

   b. Layout and paint all track lines and event markings as required and specified by current ~~1~~**NFHS (Guide)** rules.

4. Coordination

   a. The synthetic surfacing contractor shall coordinate the work specified with an authorized and appointed representative of the District, so as to perform the work during a period and in a manner acceptable to the District.

5. See the scope appendix provided by Beynon following this section.

1.02 RELATED REQUIREMENTS

A. Section 32 11 23 - Aggregate Base Courses.

B. Section 32 12 16.50 - Asphaltic Concrete Paving at Synthetic Surfacing.

C. Section 32 13 13 - Concrete Paving.

D. Section 32 16 13.50 - Concrete Curbs and Flatwork at Track

E. Section 31 22 00 - Grading: Excavation, backfill and compaction required for installation of synthetic running track surfacing.

1.03 REFERENCE STANDARDS

A. ASTM D2240 - Standard Test Method for Rubber Property--Durometer Hardness; 2015e1.

B. ~~IAAF/NCAA - Performance Specification for Synthetic-Surfaced Athletics Tracks (Outdoor); 1999.~~

~~C.~~DIN 18035-6 - Sporting Grounds Part 6~~-~~ **-** Synthetic Surfaces; ~~2008~~**2014**.

~~D~~**C**. NCAA (TF) - Men's and Women's Track and Field and Cross Country Rules; current edition.

~~E~~**D**. NFHS (Guide) - Court and Field Diagram Guide; current edition.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Preinstallation Meeting: Conduct a preinstallation meeting one week prior to start of work of this section; require attendance by all affected installers.

B. The synthetic surfacing contractor shall coordinate the work specified with the District Representative, Construction Manager, General Contractor, and related subcontractors, so as to perform the work during a period and in a manner acceptable to the District.

1.05 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

B. Product Data: Manufacturer's product data including standard specifications, installation guidelines and maintenance instructions.

1. Submit documentation that synthetic running track surfacing material is free of toxic or hazardous substances that exceed the limits set forth by the U.S. Environmental Protection Agency.

C. Shop Drawings: Show location and color of lane lines, start lines, finish lines, and related markings for District to review a minimum of 4 weeks prior to application.

1. Prepare a set of computerized calculations and diagrams to verify the accurate distance around the track for each lane and each race.
   a. Conform calculations to ~~2,~~**NFHS (Guide),** National Federation for State High School Associations.
   b. Include all standard high school races included in the striping and as indicated in this Section.
2. Consult with the District and Architect prior to the start of calculations for determination of the finish line, events to be run, location of lane numbers and additional paint markings.
3. Provide a scaled drawing to the District prior to construction as a submittal for approval.
   a. Provide the approved scaled drawing to the District as part of the closeout documents.

D. Samples: Three, ~~12~~**4** inch by ~~12~~**6** inch samples of the full-depth system in the color(s) indicated on Contract Documents.

E. Certifications:

1. Submit installer's certification that the installer has reviewed the asphalt or concrete base drawings and specifications and accepts the asphalt or concrete base will be suitable if constructed as indicated and specified.
2. Submit installer's certification that in-place concrete or asphalt substrate is acceptable as installed.
3. Submit certification from registered engineer or land surveyor that synthetic running track surface layout and dimensions are as shown on drawings.
4. A current IAAF Certificate proving the product to be installed meets the current IAAF Performance Standards for Synthetic Surfaced Athletics Tracks (Outdoor).

5. A letter signed by an authorized representative surfacing installer that the track and field surfacing has no measurable traces of heavy metals, leachable mercury, and any other hazardous materials identified by the EPA.

F. Test Reports: Reports of field quality control testing.

G. Manufacturer's Instructions: Submit copies of manufacturer's written installation instructions and other recommendations

H. Manufacturer's Qualification Statement.

I. Installer's Qualification Statement.

1. A list of completed facilities, including the installing supervisor, of the exact synthetic track surfacing system.

J. Maintenance Data: Operations and Maintenance Manual.

K. Warranty: Submit manufacturer warranty and ensure that forms have been completed in District's name and registered with manufacturer.

L. Project Record Documents: Record actual locations of installed synthetic running track surfaces.

1. Upon completion of all line Markings, the SSC shall submit to the District a ~~certification~~**letter** of accuracy ~~submitted by a Registered Engineer or Surveyor.~~**.** Confirm in the document that the track markings and layout meets the **NFHS (Guide)** requirements and the requirements of these bid documents.

1.06 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company that has produced surfacing materials for not less than 10 years with not less than five similar projects that have been in successful use for more than five years in the California Market.

B. Single Source Responsibility: Provide products and installation by the same manufacturer.

C. Installer Qualifications: Minimum five years' experience in successful installation of surfacing systems of type specified herein.

1. Submit manufacturer's certification that installer is qualified to install the products specified.

2. Submit installer's certification that installer is a member of American Sports Builders Association (ASBA).

3. Submit installer's certification that installer employs at least one ASBA “Certified Track Builder” (CTB) on installation team for project.

4. Submit not less than ten similar projects that have been installed in the California Market within the last two years.

a. Installed using the exact, ~~IAAF~~**NFHS (Guide)** certified, synthetic track surfacing, as specified herein with the contractor bidding this project.

D. Contractor must have a current California contractor’s license and DIR number at time of bid.

1.07 DELIVERY STORAGE AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Store in weathertight location and protect from damage during delivery, storage and handling.

1.08 FIELD CONDITIONS

A. Ambient Conditions: Do not install during rainfall, when rain is imminent, when freezing temperatures are forecasted or exist, or when gusting winds are occurring.

1. Work is to progress only when the installing Contractor can guarantee successful cure of the materials.

B. During surface installation and striping, all irrigation systems shall be shut-off or controlled so that no water falls on the track or event areas.

C. During set-up, installation and striping, the Site Contractor and/or District shall be responsible to have the entire track and other pertinent areas closed and secured of all activities 24 hours per day until completion of the project.

1.09 WARRANTY

A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.

B. Correct defective work within a five year period after date of Substantial Completion.

C. Provide five year manufacturer warranty for synthetic running track surface system.

1. The warranty shall cover defects in materials and workmanship not deemed as ordinary wear on a running track.

2. All material shall be guaranteed to the extent that the surfacing:

a. Has been manufactured and applied in accordance with these and the manufacturer's specifications.

b. Will hold fast and/or adhere to the asphalt, concrete, edging, filler and patches or overlay materials.

c. Will perform as specified in these specifications and the specifications of the product manufacturer in the current standard product information literature and specification sheets.

d. Is Ultra-Violet resistant and will not de-laminate, bubble, blister, fade, crack or wear excessively during the guarantee period.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Synthetic Running Track Surfacing:

1. Basis of Design Product: BSS 300 Synthetic Track Surfacing System as manufactured by Beynon Sports Surfaces, or approved equal.

2. Beynon Sports Surfaces: www.beynonsports.com/#sle.

a. Local Representative:

1) Jeb Burgess, Regional Sales Manager 559.349.8924, JBurgess@beynonsports.com.

2) Mason Farnsworth 559.237.2590, mfarnsworth@beynonsports.com.

3. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 SYNTHETIC RUNNING TRACK SURFACING

A. Color: To be selected by Architect from full range.

B. Synthetic Running Track Surfacing System: Impermeable; paved-in-place **base mat** with ~~spray-applied~~**embedded** wear layer.

1. System Thickness: ~1/2 inch.
2. Base Layer: Paved-in-place Type 2 base layer recycled SBR rubber granule and polyurethane binder sealed for impermeability.
3. Finish Layer: ~~Structural spray coating of colored polyurethane and embedded~~**Embedded** Type 2 top layer EPDM rubber granule mixture**, with two component urethane**.
4. Comply with the following as described in ~~IAAF/NCAA~~**NFHS (Guide)** Performance Specification for Synthetic-Surfaced Athletics Tracks (Outdoor):
   a. Force Reduction: 35 to 50 percent.
   b. Modified Vertical Deformation: 0.23 inch to 0.07 inch.
   c. Friction (TRRL Skid Resistance): 47.
   d. Tensile Strength:
      1) Porous Surface: 72.5 pound per square inch.
      2) Non-Porous Surface: 58 pounds per square inch.
   e. Elongation at Break: 40 percent.
   f. Maximum Rubber Content in Force Reduction Layer: 20 percent.
5. Comply with the following as described in DIN 18035-6:
   a. Spike Resistance: Class 1.
   b. Ball Rebound: 99 percent.
   c. Abrasion Resistance: 1.30.
   d. Maximum Indentation: 7/32 inch.
   e. Sliding Coefficient:
      1) Dry: 0.52.
      2) Wet: 0.49.
6. Flammability Behavior: Class 1 in accordance with DIN 4102-1.

2.03 MATERIALS

A. Polyurethanes: ISO 9001 approved.

B. Polyurethane Primer: Single-component, designed specifically for use in priming concrete, asphalt or existing, cured polyurethane prior to installation of new polyurethane coating.

C. Polyurethane Binder: Single component, 100 percent polyurethane, moisture curing, middle viscosity binding agent based on diphenylmethane diisocyanate (MDI)/TDI, containing less than 0.5 percent of TDI monomer, with no solvents or extenders (plasticizers).

D. Polyurethane Pore Filler: 2-component thixotropic colored polyurethane containing no solvents, TDI, or mercury.

E. Base Layer Granules, Type 2: Recycled black styrene-butadiene (SBR) rubber, processed and graded to 3/64 inch to 5/32 inch in size, containing less than 4 percent dust.

F. Top Layer Granules, Type 1: Colored, virgin EPDM rubber granules, processed and graded 3/64 inch to 1/8 inch in size unless otherwise specified. Provide rubber containing minimum of 20 percent EPDM and approved by resin manufacturer.

1. Specific Density: 1.60 plus or minus 0.08.

2. Hardness of 60 when tested in accordance with ASTM D2240, Shore A.

2.04 ACCESSORIES

A. Track and Event Line Marking Paint: Polyurethane paint formulated for exterior service environments in striping applications in color as specified for line markings.

1. Thickness: 12 mils dry film thickness (DFT).
2. Formulate paint to be compatible with synthetic track surface materials. Comply with VOC requirements in Section 01 61 16 - Volatile Organic Compound (VOC) Content Restrictions.
3. Colors shall be as prescribed or approved by the appropriate governing body; ~~3, 2, 1.~~**NFHS (Guide) and NCAA (TF).**

PART 3 EXECUTION

3.01 EXAMINATION

A. Verification of Conditions: Examine areas and conditions under which work is to be performed and identify conditions detrimental to proper or timely completion.

1. Do not proceed until unsatisfactory conditions have been corrected.
2. Substrate tolerances:
   a. Planarity: Not to exceed 1/8 inch in 10 feet, non-cumulative.
   b. Levelness: Not to exceed 0.1 percent in running direction.
   c. Concrete Curbs: Ensure top elevations of continuous concrete curbs are at constant elevation.

B. Flood Test: Flood substrate immediately after substrate is capable of supporting foot traffic. Allow to dry for 20 minutes.

1. If any areas of ponded water (“birdbaths”) are visible at the end of the 20 minute drying time, correct areas of substrate that allow water to pond.
2. Obtain Architect's written approval of method of correction prior to proceeding with corrective work.
3. Cold tar patching, skim-coat patching and sand-mix patching are not acceptable methods of correction.
4. Site Contractor and/or District (Not installer) to protect the base from activities and traffic that may damage the base or leave dirt, oil or other foreign material on the base prior to application of the synthetic track surface.

3.02 PREPARATION

A. Protection: Protect surfaces adjacent to track surfacing operations from polyurethane liquids.

B. Surface Preparation: Surfacing contractor to verify substrate is fully cured and free from excess surface oils and chemicals that would impair track surface installation.

1. Asphalt: Cure asphalt for no less than 28 days. Test cured asphalt and provide documentation that volatiles and latent asphalt content are within limits defined by manufacturer. See Section 32 12 16.50 - Asphalt Paving at Synthetic Running Track Surfacing.

2. Any oil spills (hydraulic, diesel, motor oil, etc.) must be completely removed, either by chipping out or removing and replacing with new, keyed in asphalt. The minimum depth of any asphalt replacement shall be one inch. The curing time for the asphalt base is 28 days. It shall be the responsibility of the surfacing contractor to determine if the asphalt substrate has cured sufficiently prior to the application of polyurethane surfacing system.

C. Asphalt paving installer to ensure that asphalt compaction tests indicate compaction of 95 percent or greater. Check asphalt with 10 foot straightedge in all directions. Asphalt paving installer to repair areas not in conformance or replace with new materials, recompact, and recheck surfaces.

3.03 INSTALLATION

A. General:

1. Comply with manufacturer's recommendations.
2. Prime areas to be surfaced.
3. Make substrate surface repairs and minor planarity corrections with repair compound.
4. Install track surface as specified to achieve track surface performance and physical dimensions within tolerances.

3.04 INSTALLATION OF PAVED-IN-PLACE SYNTHETIC TRACK SURFACE

A. Priming: Prime only area to be covered within working day to ensure good bond to base. Apply primer at manufacturer's recommended rate.

1. Asphalt: Prime asphalt substrates with mixture of one part polyurethane binder.

B. Base Layer: Mix base layer granules with polyurethane binder at manufacturer's recommended rate until homogeneous. Pave mixture in place using heated mechanical screed paver specially designed for this work. Apply to recommended depth at recommended application rate.

C. Seal Coat: Seal base layer by scraping thixotropic mixture of pore filler and rubber dust onto surface to render it impermeable. Inspect sealed surfaces for pinholes prior to further application. Apply at rates recommended by material manufacturer.

D. Wearing Course: Integrate the 1 to 3mm EPDM granules into the 2 component urethane to achieve the full depth of the 4 mm wearing course. The resilient embedded textured finish shall be a dense matrix of exposed EPDM granules. Apply the homogeneous wearing course in situ with the base course.

3.05 TRACK AND EVENT LINE MARKING

A. Track and Event Line Markings, General: Comply with the requirements of the referenced ~~1~~**NFHS (Guide)** standards.

B. Provide ~~1~~**NFHS (Guide)** standard markings for the following track and field events:

1. 100 m; white lines.
2. 200 m; white lines 1 turn stagger.
3. 400 m; white lines 2 turn stagger.
4. 800 m; (one turn stagger in green line) green waterfall line where runners break.
5. 1500 m; waterfall line white and dashed black line 3 meters behind start line for start.

6. 1600 m; Waterfall line (white) and dashed black line 3 meters behind start line for start.
7. 3200 m; Waterfall line (white) and dashed black line 3 meters behind start line for start.
8. 1 mile; Black waterfall line and dashed black line 3 meters behind start line for start.
9. 2 mile; Black waterfall line and dashed black line 3 meters behind start line for start.
10. Waterfall line at 200 meters for medley relays – white.
11. Provide alleys on outside lane staggered start for large field 1600 m and 3200 m starts – white line from inside of lane 5 to outside edge of lanes on track.
12. 100 m hurdles; white start line, yellow marks for hurdle locations.
13. 110 m hurdles; white start line, blue marks for hurdle locations.
14. 300 m hurdles (men and women); white start lines, one turn stagger, green marks for hurdle locations.
15. 400 m hurdles (men and women): black marks for hurdle locations .
16. 4 by 100 m relay; white start line, 2 turn stagger, solid gray for exchange zones.
17. 4 by 400 m relay; white start lines, 3 turn stagger distances, blue diamonds for exchange zones, white line where runners break out of lanes.
18. 4 by 800 m relay.
19. 4 by 1500 m relay.
20. Other events defined by District.

C. Paint school mascot name in full color on the home grandstand straightaway.

D. Paint school name on visitor grandstand straightaway.

1. Letter Size: 32 inches.
2. Color: Yellow.

3.06 ~~TRACK CURB MARKERS~~

~~A. Surveyor to provide markers placed centered in the inside track curb at the tracks' radius points.~~

~~1. Marker Designations:~~

~~a. Beginning of Curve (BC)~~

~~b. Midpoint of Curve (MC)~~

~~c. End of Curve (EC)~~

~~d. There shall be six total markers. Mark each BC, MC or EC (as appropriate).~~

~~B. Concrete contractor shall install markers during setting of concrete curb. Embed marker into concrete such that top of marker is flush with the top of curb elevation.~~

~~3.07~~ TOLERANCES

A. Percent Granules: Variation of plus or minus 2 percent.

B. Surface Thickness, variation: Variation of minus 0.0 inch to plus 1/8 inch.

C. Color Deviation: 5 Delta E (Hunter) units maximum allowed.

D. Slopes:

1. Track Oval:
    a. Running Direction: 1.0 percent, maximum.
    b. Lateral Slope: 1.0 percent maximum.
2. High Jump ("D" area): 1.0 percent maximum, downwards to the cross bar.
3. Run Ups: Same as track oval unless located in the High Jump ("D") area.

E. Striping:
1. Calculations shall be made to the nearest 1/100th of a foot.
2. Angles shall be set by using a total station GPS survey equipment or theodolite capable of reading direct to 20 seconds.
3. Measurement shall also be made with a steel tape in engineering scale.

3.~~08~~07 FIELD QUALITY CONTROL

A. See Section 01 40 00 - Quality Requirements for additional information.

B. Striping Layout:
1. Employ registered surveyor to document compliance of in-place work with the Contract Documents and the referenced standards.
2. Submit reports.

3.~~09~~08 CLEANING

A. Leave surfacing in clean condition and free of surface defects.

B. Reapply and touch up paint striping once during the warranty period.

3.~~10~~09 PROTECTION

A. Protect installed surfacing from damage during the balance of construction activity.

END OF SECTION

Beynon Scope Appendix for BSS 300

PART 1 – GENERAL

1.1 SCOPE OF WORK:

The Owner has purchased synthetic track surfacing and all associated line striping direct under separate contract. Beynon and its installation are not part of the bid. This section is for clarification and in coordination with the general contractor's scope of work and project schedules.

A. It shall be the responsibility of the synthetic track surfacing manufacturer to provide all labor, materials, equipment and tools necessary for the complete installation of the synthetic track surfacing system as indicated on the plans and as specified herein. The installation of all materials shall be performed in strict accordance with the manufacturer's installation instructions and in accordance with all approved shop drawings.

B. Perimeter edge details required for the system shall be as detailed and recommended by the Manufacturer, and as approved by the Owner. Supply and installation of these details will be under the scope of work of the general contractor based on project plans and are not part of the synthetic track surfacing manufacturer / installer's scope.

C. The system shall consist of, but not necessarily be limited to, the following:

1. An acceptable subbase including asphalt paving, base rock, concrete curbs and a drainage system to drain the impermeable track surfacing system constructed by the General Contractor per the contract drawings.

2. Beynon BSS 300 Track Surfacing System.

PART 2 – GENERAL CONTRACTOR QUALIFICATIONS FOR INSTALLING THE DRAINAGE BASE

A. Installers of the subsurface base system and AC paving for the track shall be required to comply with and supply proof/references to the Owner 10 days post award for the following information:

1. General Contractor installing the base system must have a Class A California Engineering Contractor's License.

2. General Contractor and / or AC paving contractor must have prior direct experience in paving a base for synthetic running track to required tolerances and must have paved a minimum of 5 tracks in California during the past 3 years, with a minimum size of 60,000 SF per track and field event areas.

PART 3 – SYNTHETIC TRACK SURFACING MATERIAL/INSTALLATION

3.1 Beynon BSS 300 Track Surfacing System

Beynon and its installation have been purchased <u>direct via separate CMAS contract</u>.

Contacts for Beynon Sports are Mason Farnsworth. (559) 237-2590

A. Track surfacing will commence after the completed installation of the FieldTurf synthetic turf and any other trades that need access the track and/or D areas.

B. Installation of track surfacing including mobilization, prep work, seal layer, force reduction layer, wearing layer and clean up, will require **20 working days.**

C. Track striping will require **4 additional working days** by a separate crew.

PART 4 – TRACK MARKINGS

A. Standard NFHS and CIF line markings on track oval and event areas are included as well as lettering of school name or nickname on one straight. Minor modifications to the above will be reviewed with owner and will be free of charge. Large logos or extra lettering may be subject to additional charges.

PART 5 – CLEANING RECOMMENDATIONS

A. The general contractor shall protect installed track asphalt base from subsequent construction operations during the 28 curing time.

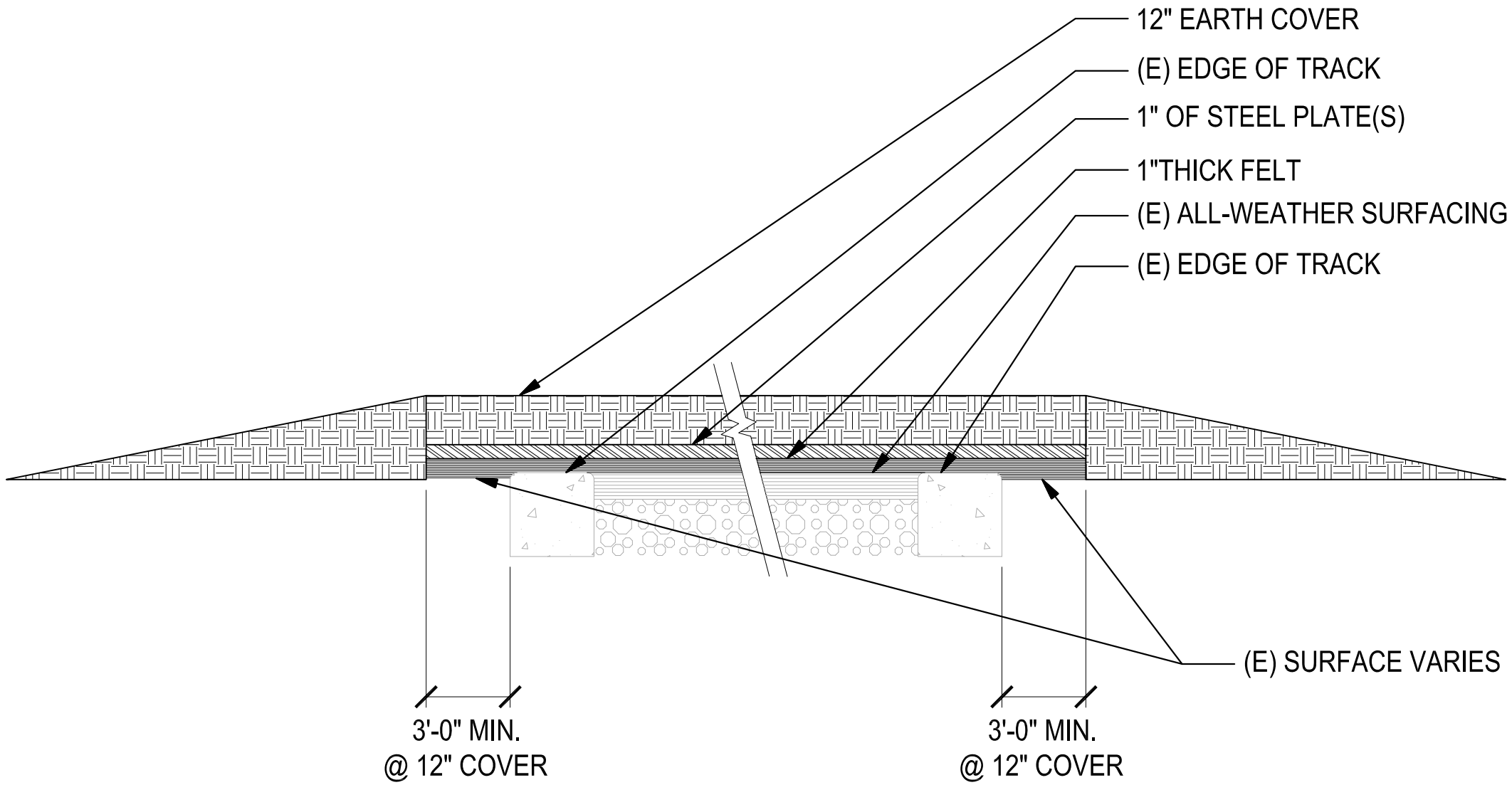
B. Do not permit traffic over unprotected asphalt prior to track surfacing.

C. General Contractor shall provide the labor, supplies, and equipment as necessary for final cleaning of asphalt base and installed items prior to track surfacing installation.

PART 6 – PROJECT CLOSEOUT

A. Beynon will train the Owner's facility maintenance staff in the maintenance and care of the new track surfacing.

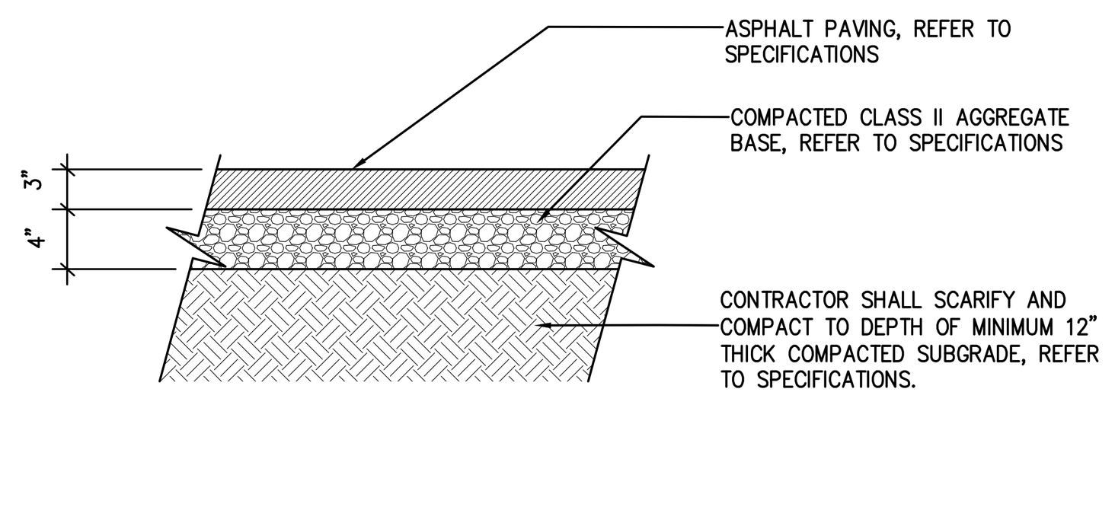
END OF SECTION



NOTES:
MINIMUM REQUIRED TRACK PROTECTION AT ACCESS

ALL-WEATHER TRACK PROTECTION

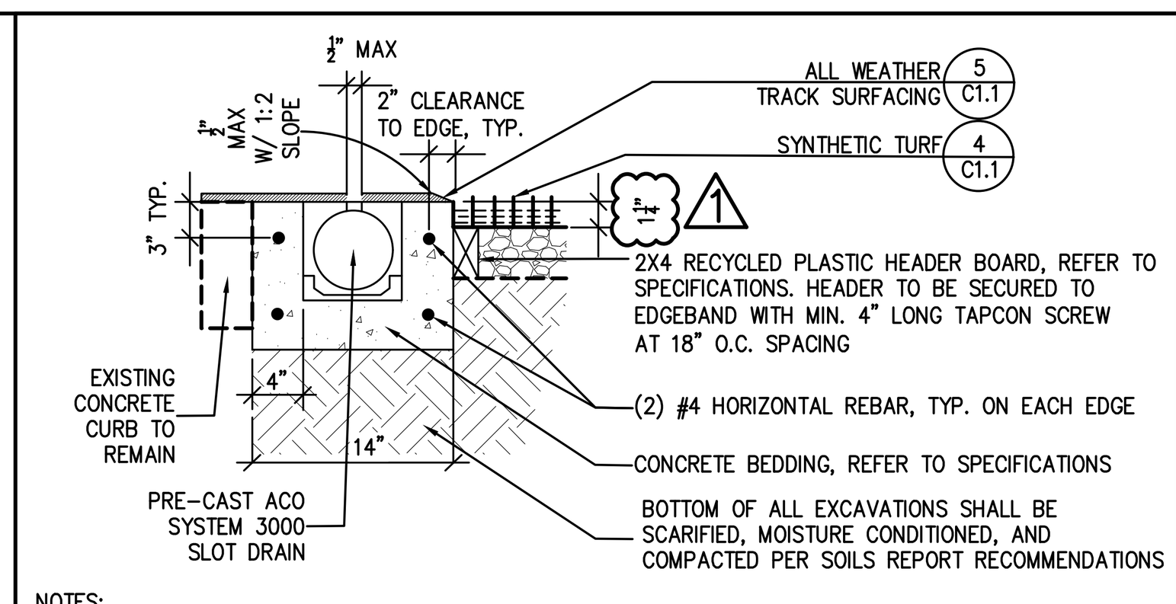
NTS



NOTE:

- ALL AGGREGATE BASE AND ASPHALT PAVING DIMENSIONS ARE REQUIRED MINIMUM THICKNESS, REFER TO SPECIFICATIONS.

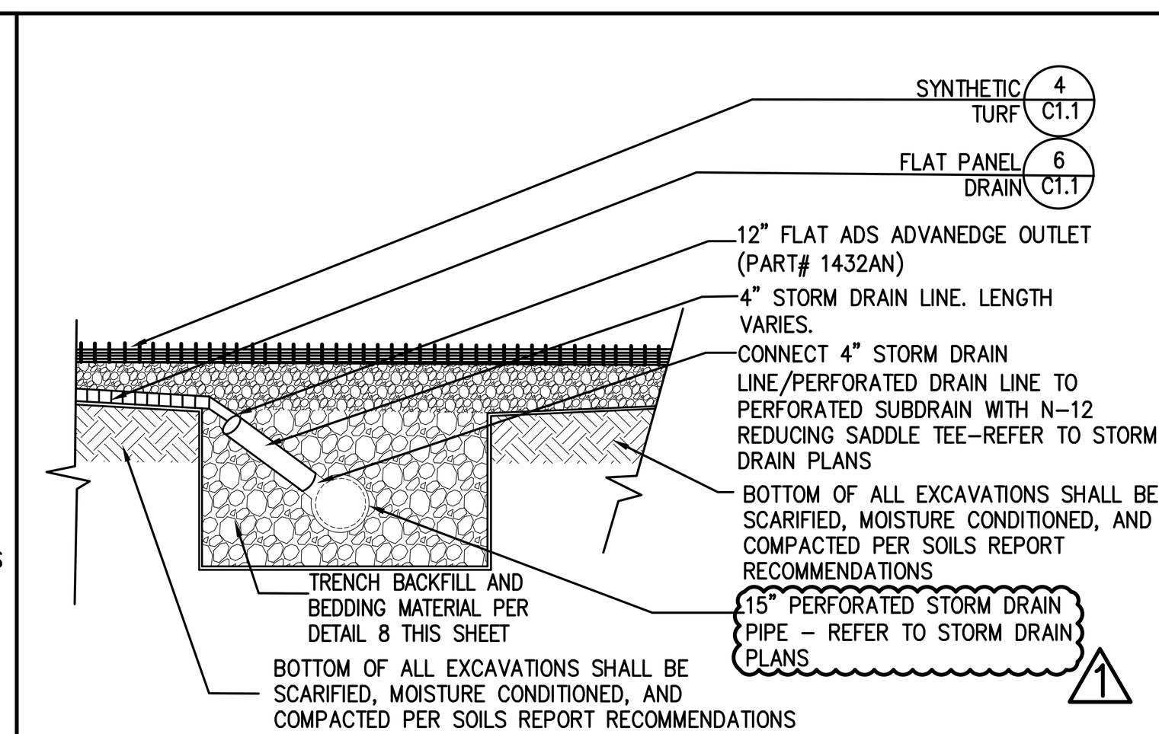
1 ASPHALT PAVING UNDER TRACK SURFACE N.T.S



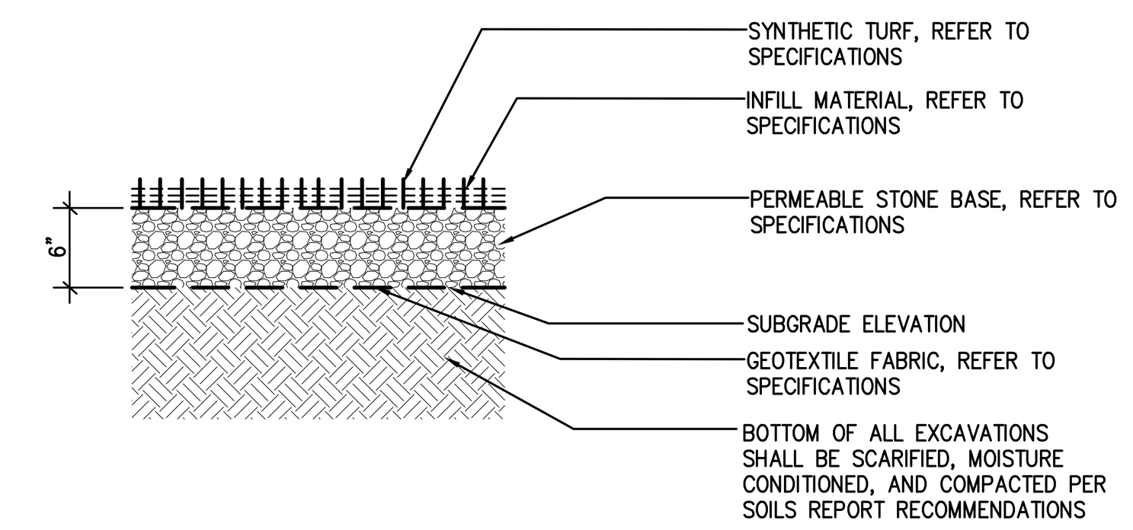
NOTES:

- CONCRETE BEDDING SHALL HAVE SAW CUT JOINTS AT BOTH ENDS OF THE DRAIN SEGMENTS EACH SIDE.
- PROVIDE SAW CUT JOINT 8' ON CENTER MAX. AND ALIGN WITH FENCE POSTS.
- JOINTS TO BE ON BOTH SIDE OF GRATE.
- CONCRETE FINISH FOR TRENCH DRAINS SHALL BE MEDIUM BROOM FINISH LENGTHWISE.

2 TRACK TRENCH DRAIN N.T.S



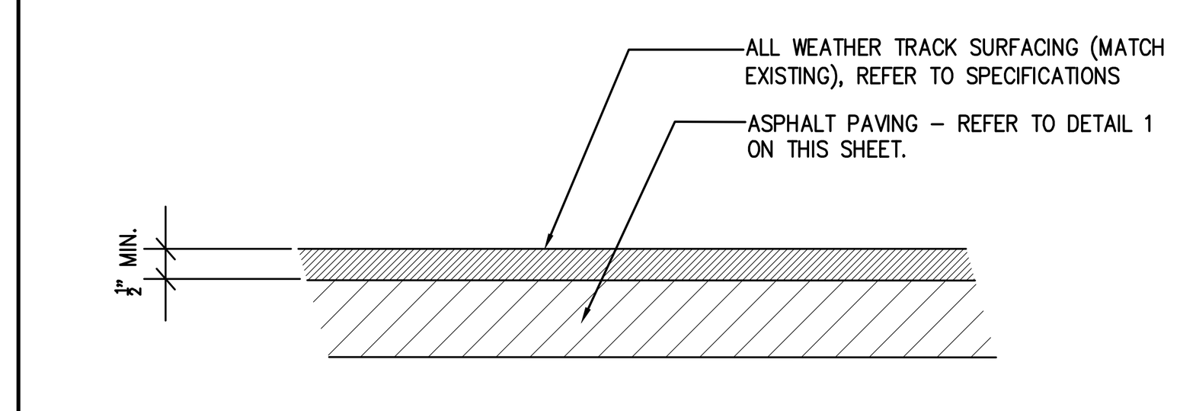
3 FLAT DRAIN CONNECTION N.T.S



NOTE:

- IDENTIFIED FINISH GRADES OF SYNTHETIC TURF SHALL BE THE TOP OF INFILL MATERIAL. TOP OF INFILL MATERIAL SHALL BE BETWEEN ⅛" AND ¼" BELOW ADJACENT ACCESSIBLE SURFACES.

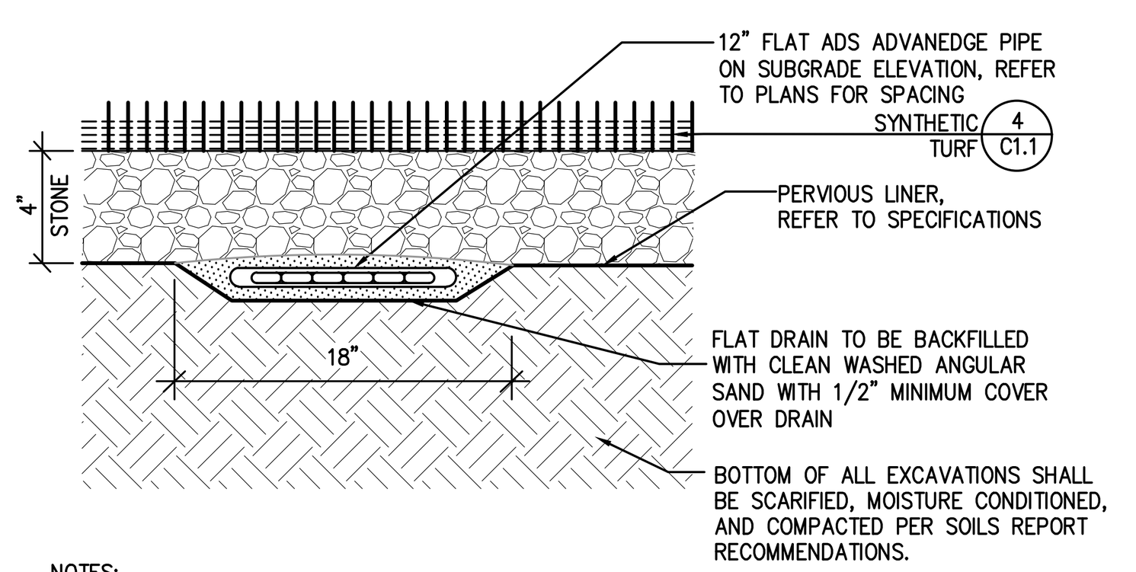
4 SYNTHETIC TURF N.T.S



NOTES:

- CONTRACTOR TO PROVIDE THE TRACK SURFACING TO THE EDGE OF THE ACO DRAIN ALONG THE TRACK DRAIN AND D-ZONES.
- ALONG THE D-ZONE EDGE OF THE TRACK, THE TRACK SURFACING SHALL BE INSTALLED ONTO THE EDGEBAND.
- CONTRACTOR SHALL MATCH THE TYPE, COLOR AND MAKE OF THE EXISTING TRACK SURFACE. CONTRACTOR SHALL CONTACT BANYON REPRESENTATIVE FOR FURTHER INFORMATION AND SUBMIT CUT SHEETS TO ARCHITECT FOR REVIEW.

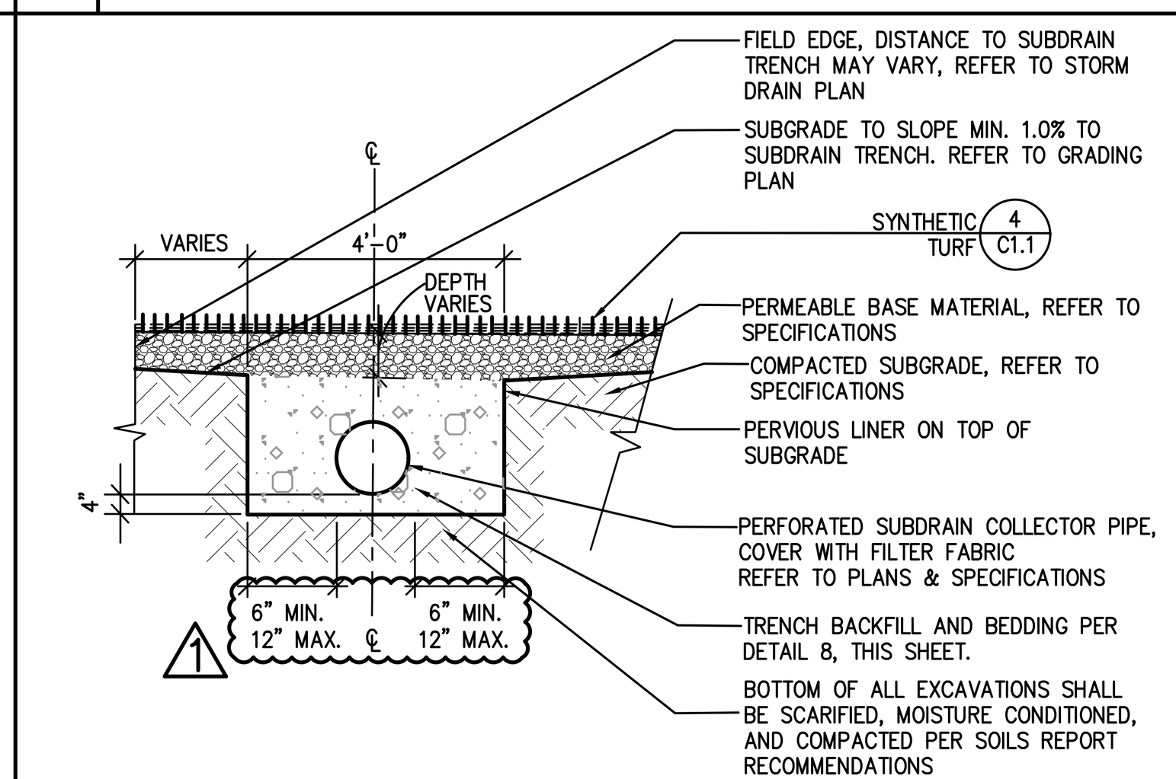
5 ALL WEATHER TRACK SURFACING N.T.S



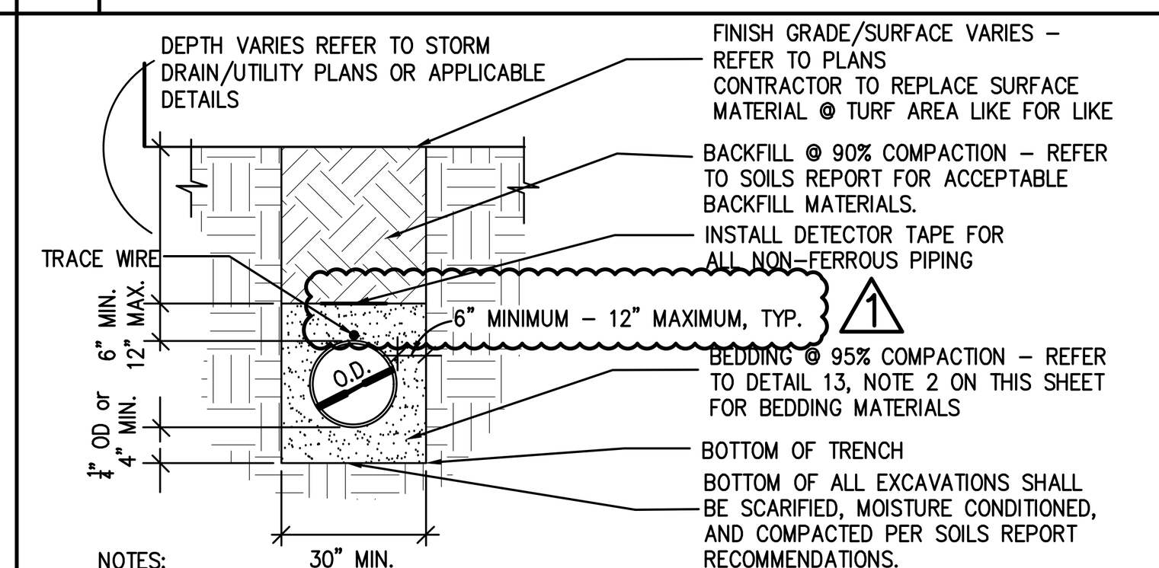
NOTES:

- CONTRACTOR TO USE MANUFACTURER APPROVED ADAPTERS AND FITTINGS TO CONNECT FLAT PANEL DRAIN TO COLLECTION DRAIN.
- REFER TO DETAIL 3 ON THIS SHEET FOR CONNECTION TO SOLID SUBDRAIN

6 FLAT PANEL DRAIN N.T.S



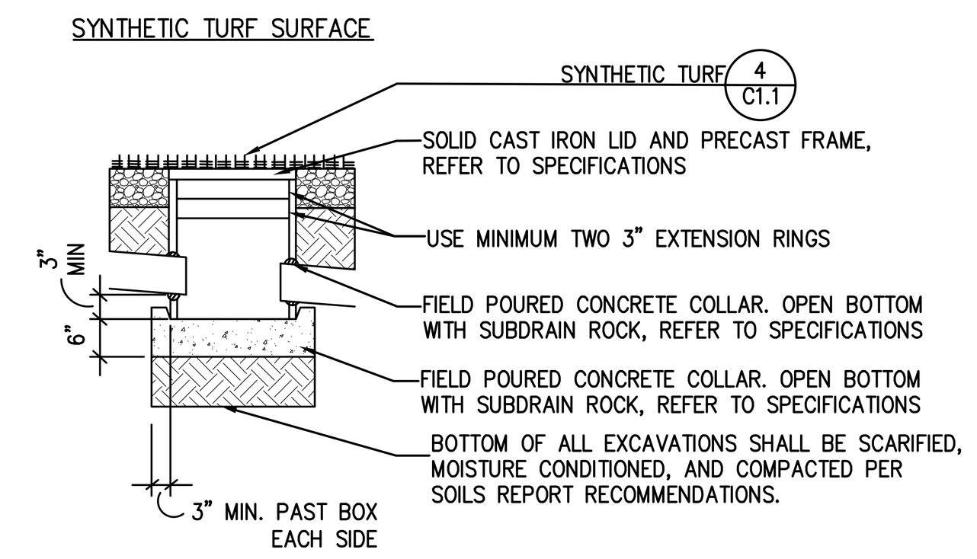
7 PERFORATED SUBDRAIN N.T.S



NOTES:

- CONTRACTOR TO INSTALL SURFACING IMPROVEMENTS PER DRAWINGS, SECTIONS FOR SURFACING IMPROVEMENTS SHALL SUPERCEDE BACKFILL MATERIAL.
- WHERE SOLID WALL STORM LINE ARE LOCATED IN SYNTHETIC TURF SUBDRAIN TRENCH REFER TO DETAIL 10 - "TYPICAL FIELD & PIPE SECTION W/ VERTICAL TRENCH".
- ALL TRENCHING AND BACKFILL RELATED WORK SHALL BE SUPERVISED AND APPROVED BY FIELD GEOTECHNICAL ENGINEER PRIOR TO FILLING THE TRENCHES.

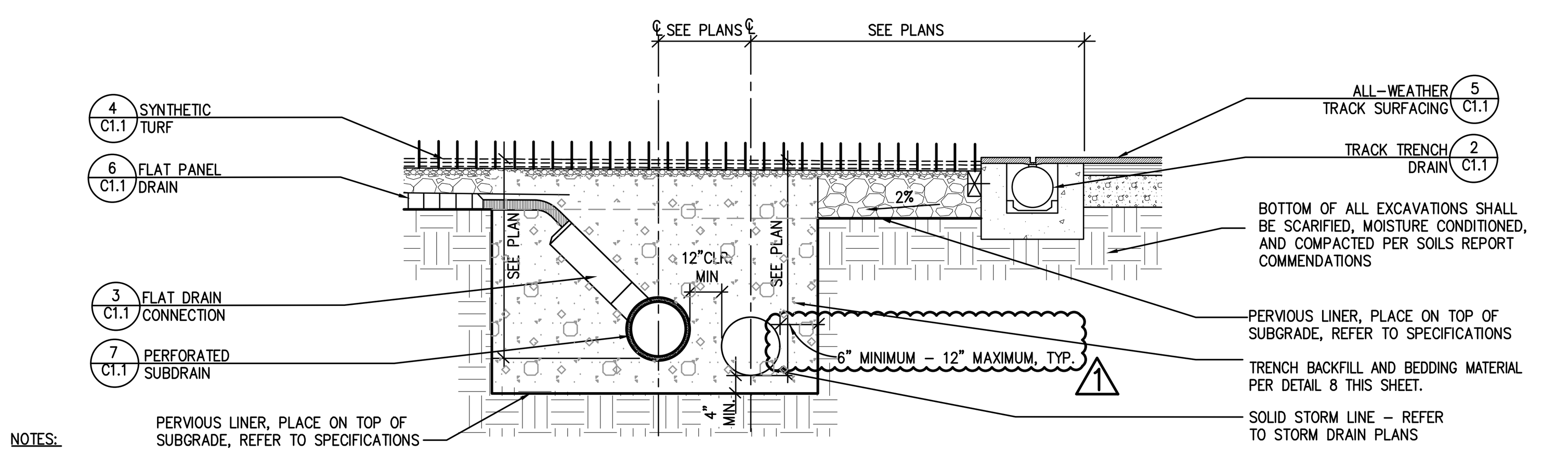
8 TRENCH BACKFILL N.T.S



NOTES:

- ALL GRATES SHALL BE FITTED WITH LOCK-DOWN MECHANISMS OR BOLT-DOWN COVERS.
- SURFACE TREATMENT TO RECEIVE SYNTHETIC TURF BACKING GLUED TO TOP OF LID CERTAIN LID SIZES AND/OR ADA COMPLIANT LIDS MAY NOT BE AVAILABLE AND MAY NEED TO BE FABRICATED
- ALL GRATES LOCATED WITHIN VEHICULAR TRAFFIC AREAS ARE TO BE TRAFFIC-RATED. ALL GRATES LOCATED WITHIN PEDESTRIAN TRAFFIC AREAS ARE TO BE ADA COMPLIANT AND HEAL PROOF.
- ENSURE PROPER COMPACTION AROUND BASIN/BOX IN SYNTHETIC TURF TO PREVENT SETTLING AROUND EDGE.

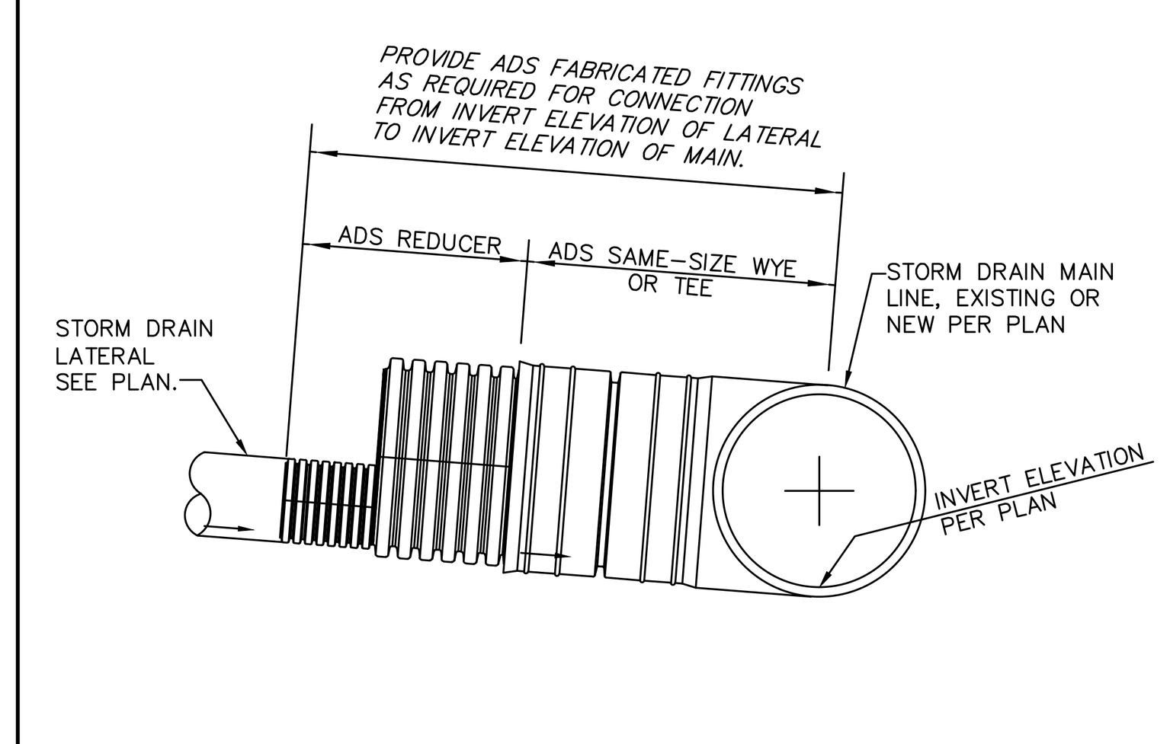
9 CATCH BASIN/JUNCTION BOX N.T.S



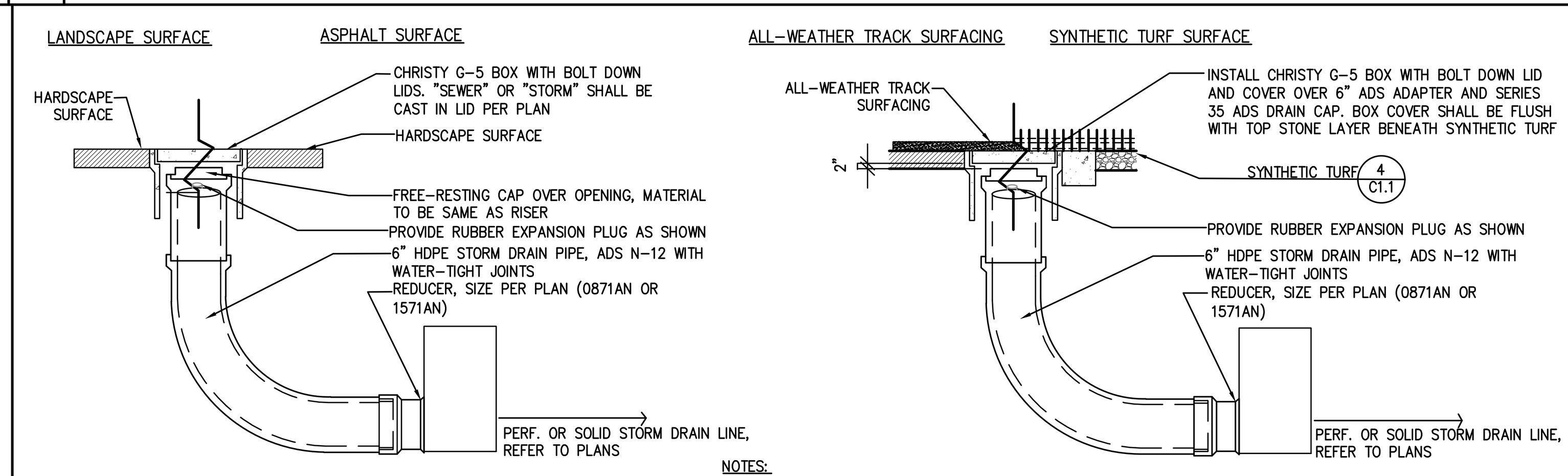
NOTES:

- TRENCH OPTION - CONTRACTOR MAY VERTICALLY TRENCH A MIN. 3' WIDE IN LIEU OF THE TAPERING TRENCH. ALL DEPTHS, PIPE SLOPES AND COVERAGE IS PER PLANS.
- MAINTAIN A 12" MIN. SEPARATION WHEN IRRIGATION OR DOMESTIC WATER LINES ARE REQUIRED TO CROSS ANY ELECTRICAL LINES, THESE WATER LINES SHALL BE BURIED BELOW THE ELECTRICAL LINES.

10 TYPICAL FIELD & PIPE SECTION WITH VERTICAL TRENCH N.T.S



11 CONNECTION OF STORM DRAIN PIPES OF DIFFERENT SIZES N.T.S



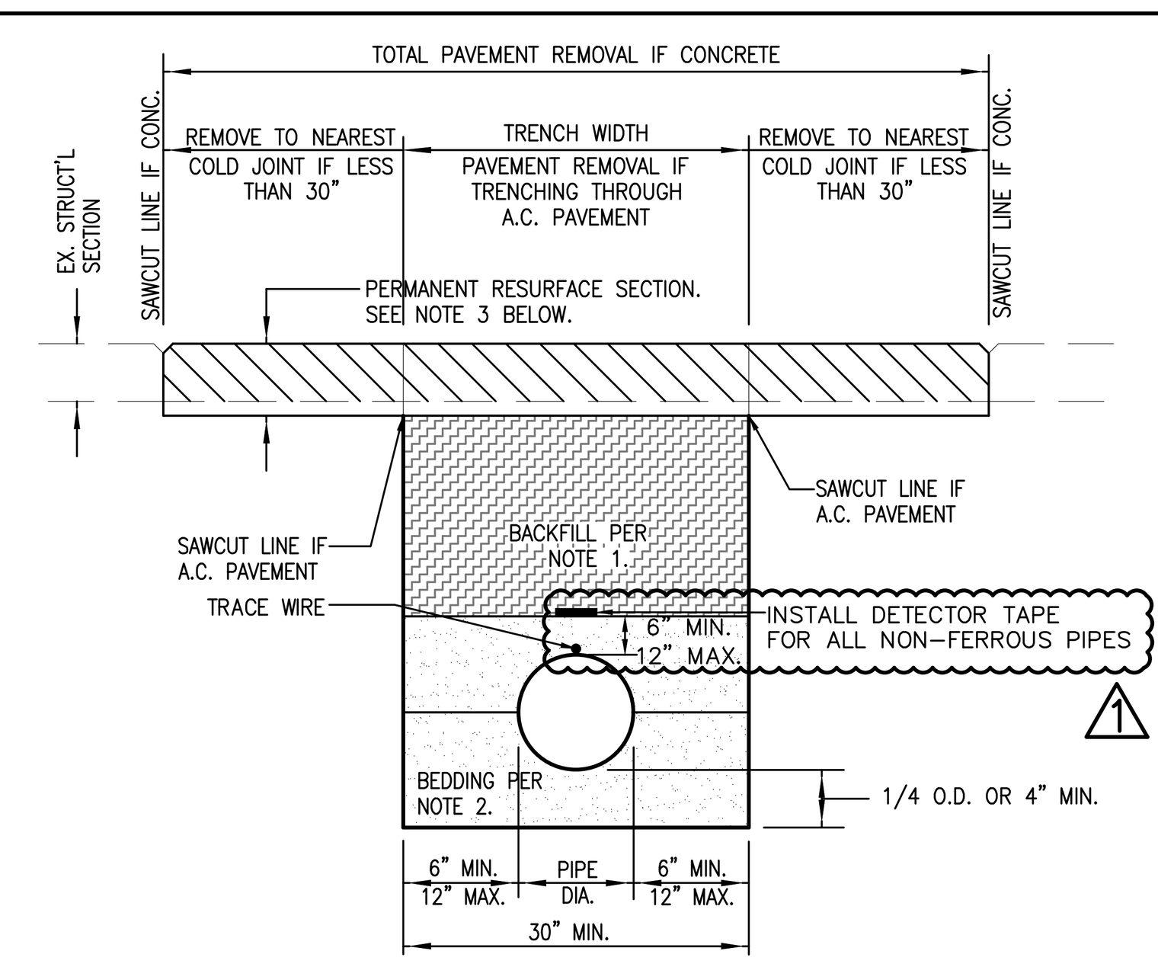
NOTES:

- IN SYNTHETIC TURF, CLEANOUT SHALL HAVE 4" MIN. CONCRETE COLLAR. TURF TO BE ADHERE TO COLLAR AND CLEANOUT LID AND THEN CUT AROUND EDGE OF LID.

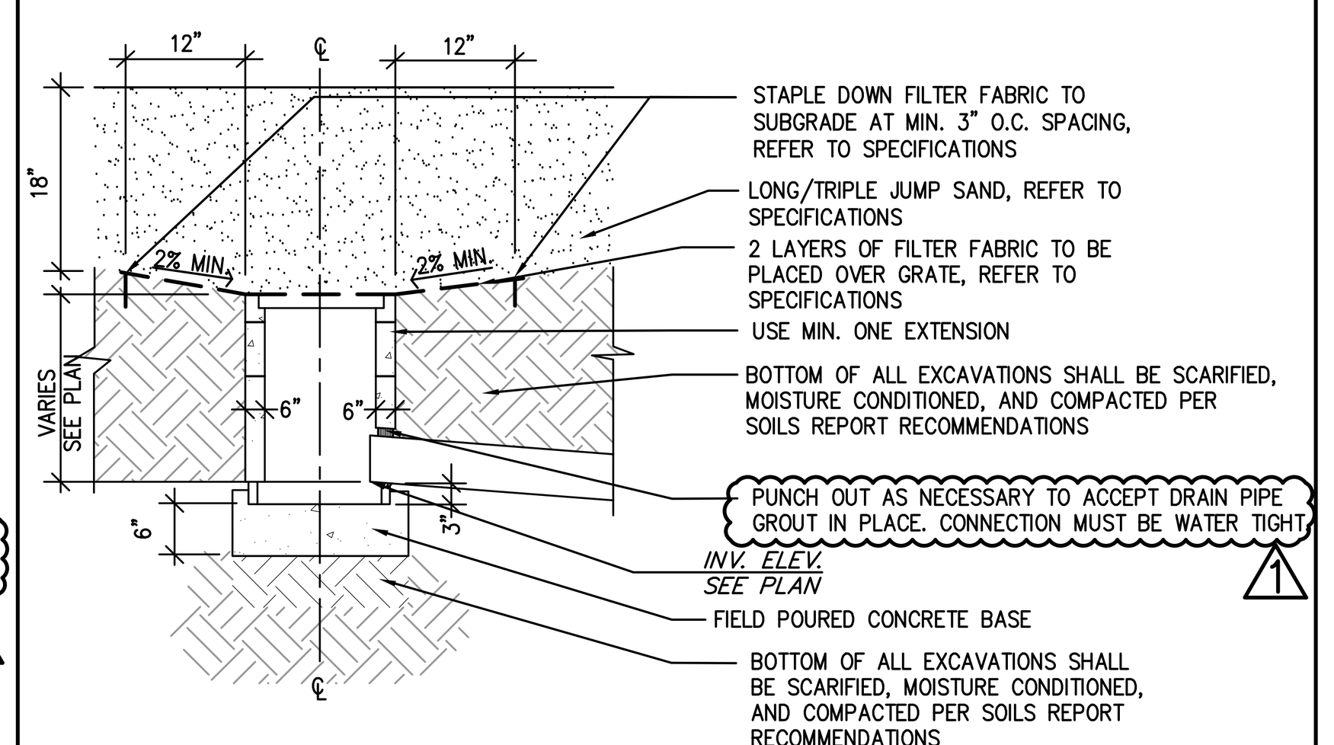
12 SANITRAY/STORM/PERF/FRENCH/ROCK DRAIN CLEANOUT N.T.S

NOTES:

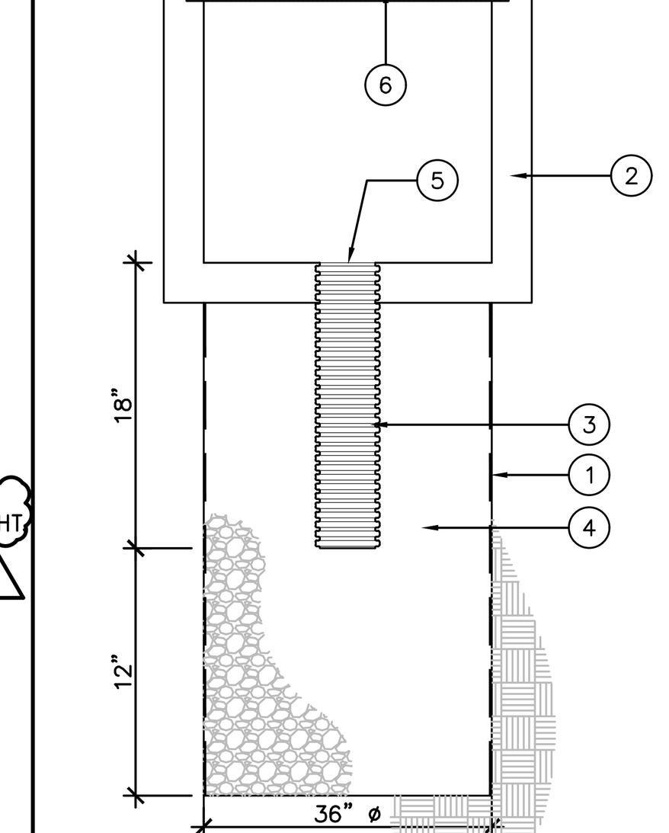
1. *PROVIDE BACK FILL MATERIAL IN UTILITY TRENCH PER GEOTECH REPORT RECOMMENDATIONS.*
2. *PROVIDE BEDDING MATERIALS IN UTILITY TRENCH PER GEOTECH REPORT RECOMMENDATIONS.*
3. *PERMANENT RESURFACE NOTE:*
   a. *IF TRENCH IS IN EXISTING AC PAVEMENT, THE RESURFACE SECTION SHALL MATCH THAT OF THE EXISTING STRUCTURAL SECTION.*
   b. *IF TRENCH IS IN EXISTING CONCRETE PAVEMENT, THE RESURFACE SECTION SHALL MATCH THAT OF THE EXISTING STRUCTURAL SECTION.*
4. *ALL TRENCHING AND BACKFILL RELATED WORK SHALL BE SUPERVISED AND APPROVED BY FIELD GEOTECHNICAL ENGINEER PRIOR TO FILLING THE TRENCHES.*



13 SINGLE UTILITY TRENCH DETAIL AT EXISTING PAVEMENT LOCATION N.T.S

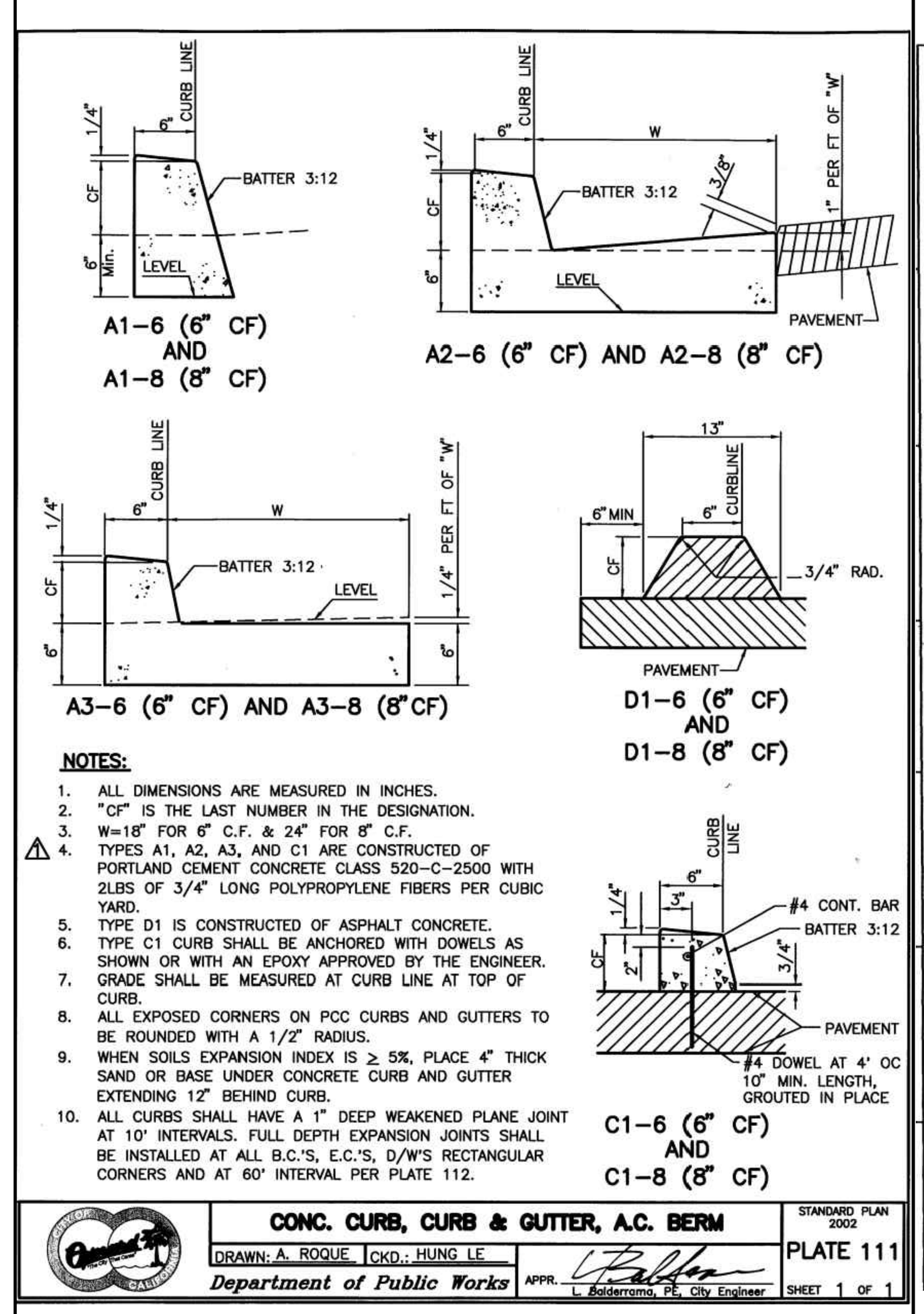


14 SAND PIT CATCH BASIN N.T.S

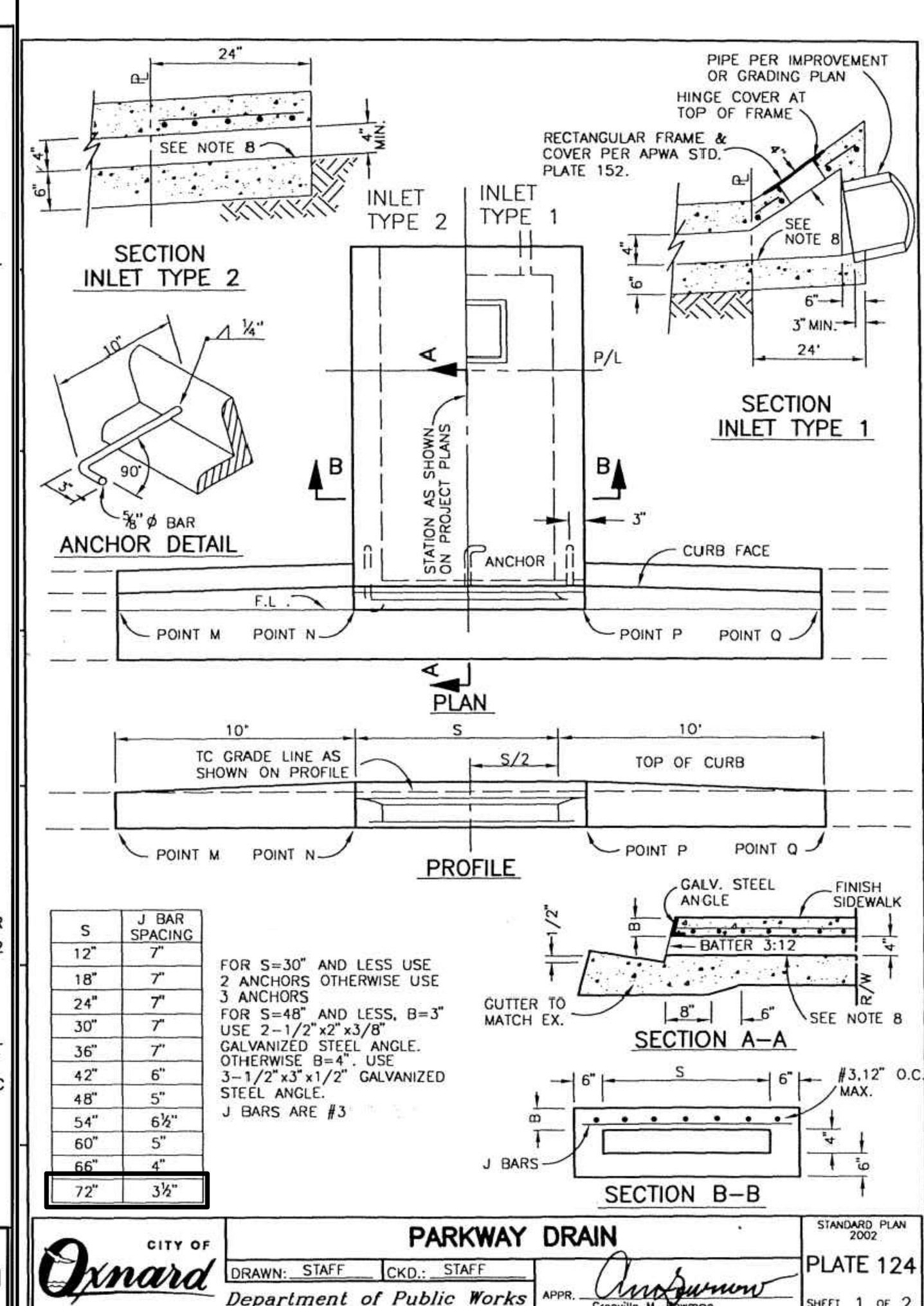


1. NEW GEOMEMBRANE LINER, TO BE PLACED ALONG THE VERTICAL WALLS TO REDUCE LATERAL FLOW. MIN. THICKNESS 30 MILS, SUBMIT CUT SHEET FOR REVIEW AND APPROVAL
2. NEW SPPWC CATCH BASIN PER PLANS AND DETAILS.
3. 6" DIA. SDR35 PERFORATED PIPE EXTENSION W/ WATERTIGHT JOINT, TYP.
4. AUGER 3FT DIA. DRY WELL, TYPICAL. FILL W/ WASHED GRAVEL, 3/4" CRUSHED ROCK.
5. CONTRACTOR TO CORE OPENING AT BOTTOM OF CATCH BASIN ACCOMMODATING 6" DIA. OUTLET PIPE.
6. BOLTED DOWN AND VANDAL PROOF STEEL GRATE, NOT REQUIRED TO BE ADA COMPLIANT.

15 TEMPORARY BUBBLER/DRYWELL DETAIL N.T.S



16 CURB AND GUTTER (CITY OF OXNARD PLATE 111) N.T.S

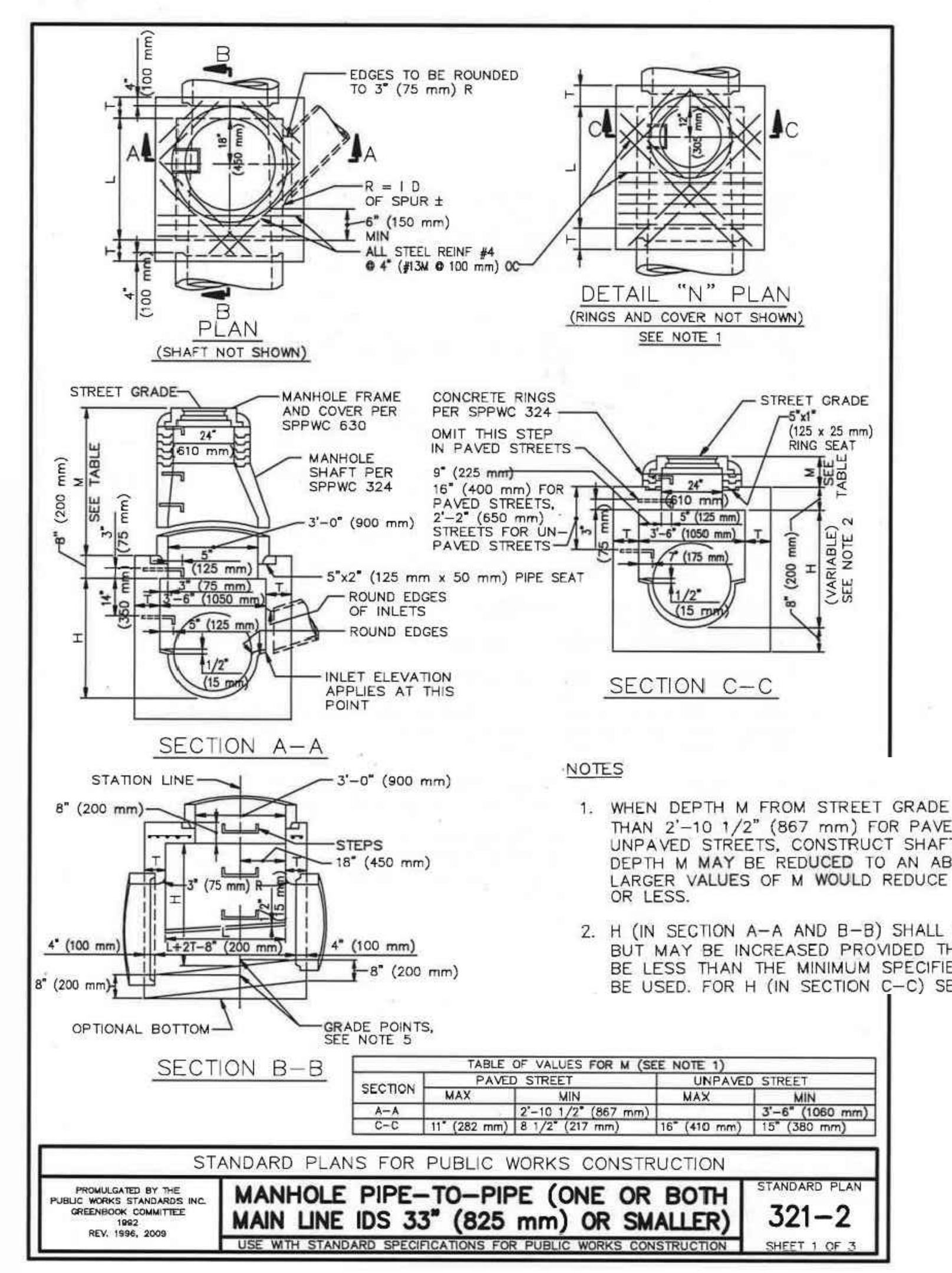


NOTES:

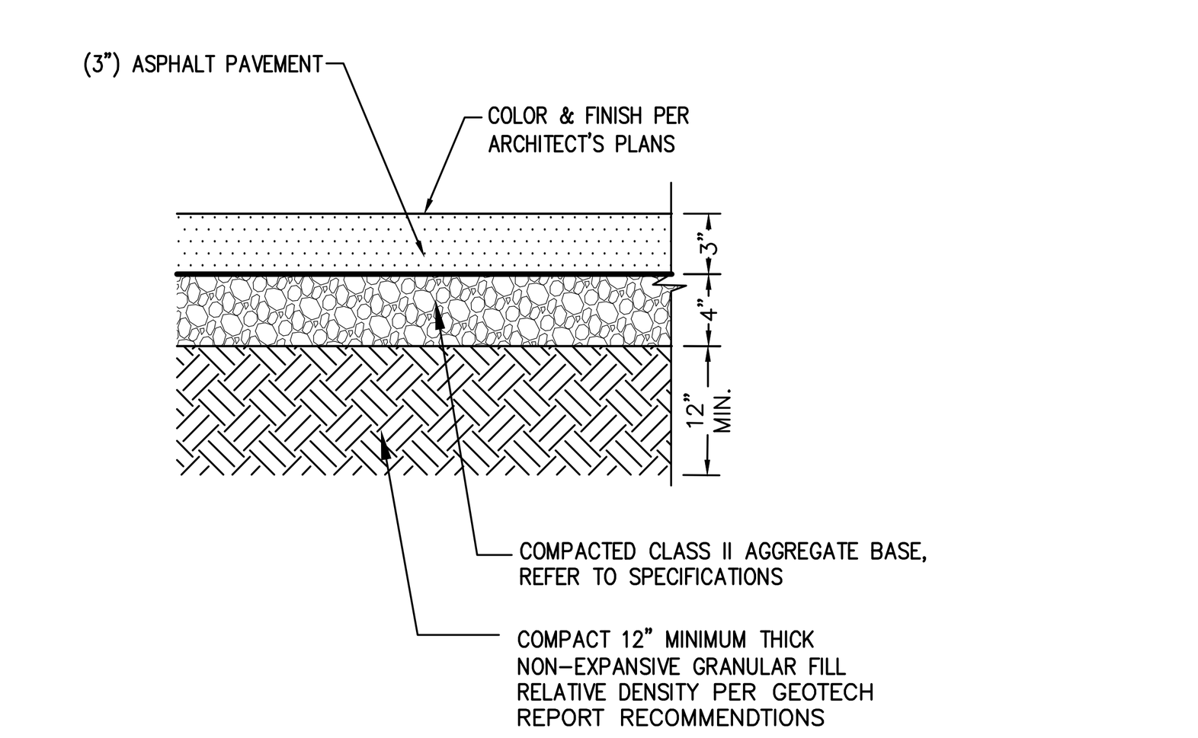
1. FLOOR OF BOX SHALL BE TROWLED SMOOTH.
2. IF THE TOE OF SLOPE IS ALLOWED WITHIN THE R/W, INLET TYPE 1 BEGINS AT THE TOE RATHER THAN AT THE R/W LINE.
3. FOR OPEN DITCH (TYPE 2), THE 24" EXTENSION BEYOND THE R/W LINE IS NOT REQUIRED WHEN BACK OF WALK IS 24" OR MORE FROM THE R/W LINE. HOWEVER, THE PIPE SHALL EXTEND TO THE R/W LINE IN ANY EVENT.
4. TOP OF INLET STRUCTURE (TYPE 1 & 2) SHALL BE FLUSH WITH ADJACENT SURFACE WHERE PRACTICAL.
5. A HEADED STEEL STUD WITH A ⅜" x 6-⅜, 1" HEAD ATTACHED BY A FULL PENETRATION BUTT WELD MAY BE USED AS AN ALTERNATE ANCHOR.
6. NORMAL CURB FACE AT POINT M AND Q. CURB FACE IS B + 5" AT POINT N AND P.
7. THE 3" LEG OF THE ⅜" DIA. ANCHORS SHALL BE PARALLEL TO THE TOP OF SIDEWALK.
8. SLOPE = 2.0%

PARKWAY DRAIN — PLATE 124 — Department of Public Works — SHEET 2 OF 2

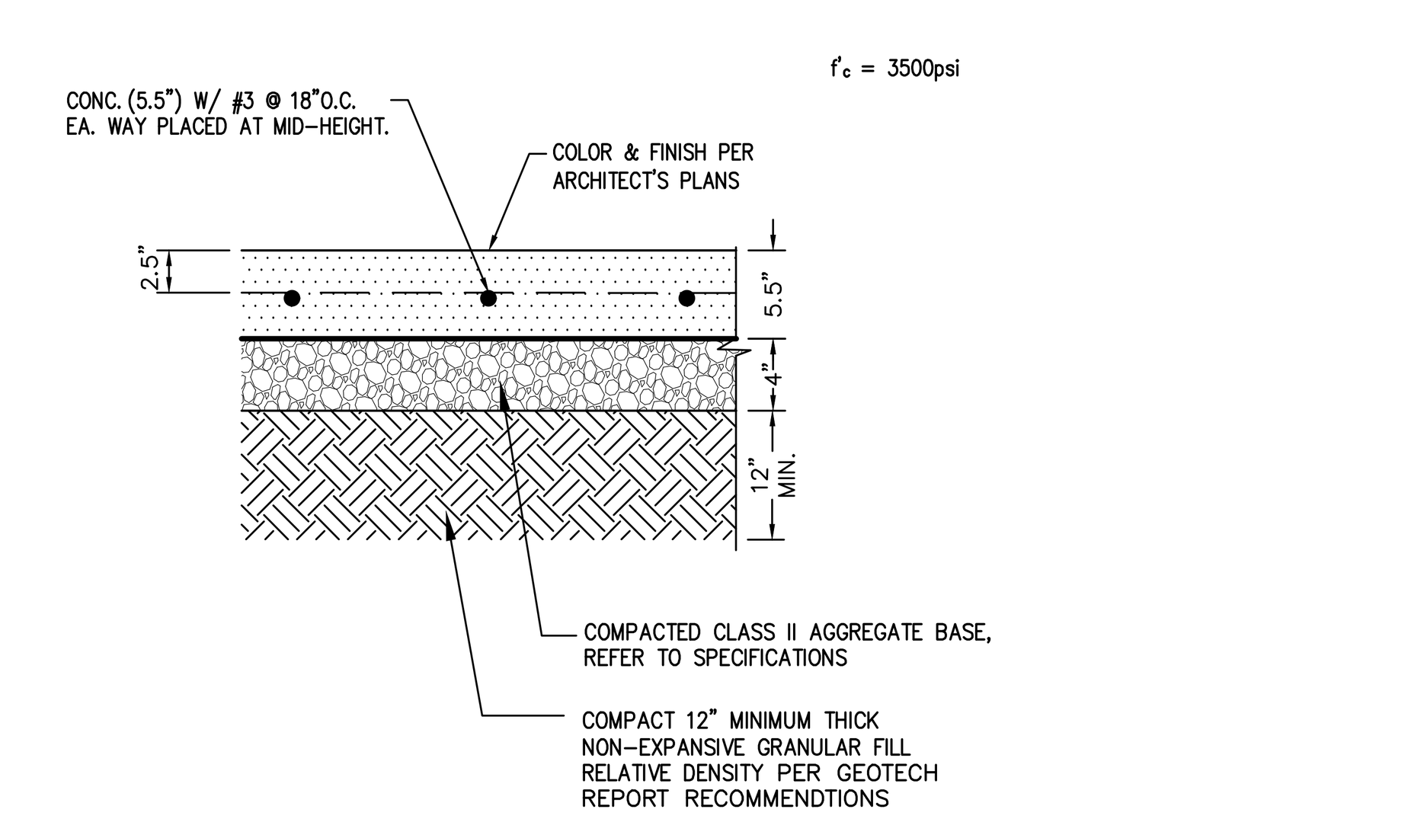
17 PARKWAY DRAIN (CITY OF OXNARD PLATE 124, 'S'=72") N.T.S



18 MANHOLE PIPE TO PIPE N.T.S



19 ASPHALT PAVEMENT N.T.S



20 HEAVY DUTY CONCRETE PAVEMENT N.T.S

AGENCY REVIEW

LITTLE™
DIVERSIFIED ARCHITECTURAL CONSULTING

1300 Dove Street, Suite 100
Newport Beach, CA. 92660
T: 949.698.1400
www.littleonline.com

CLIENT NAME

OXNARD UNION HIGH SCHOOL DISTRICT

PROJECT NAME

HUENEME HIGH SCHOOL TRACK & FIELD IMPROVEMENTS - INC 1

500 W BARD RD, OXNARD, CA. 93033

CONSULTANT

SEAL

ISSUE FOR: DSA SUBMITTAL

ISSUE DATE: 09/23/19

REVISIONS

NO.	REASON	DATE
1	ADDENDUM#1	10/21/19

PROJECT TEAM

PRINCIPAL IN CHARGE: BB

PROJECT MANAGER: BB

DESIGN TEAM: SA, ML, VS, AT

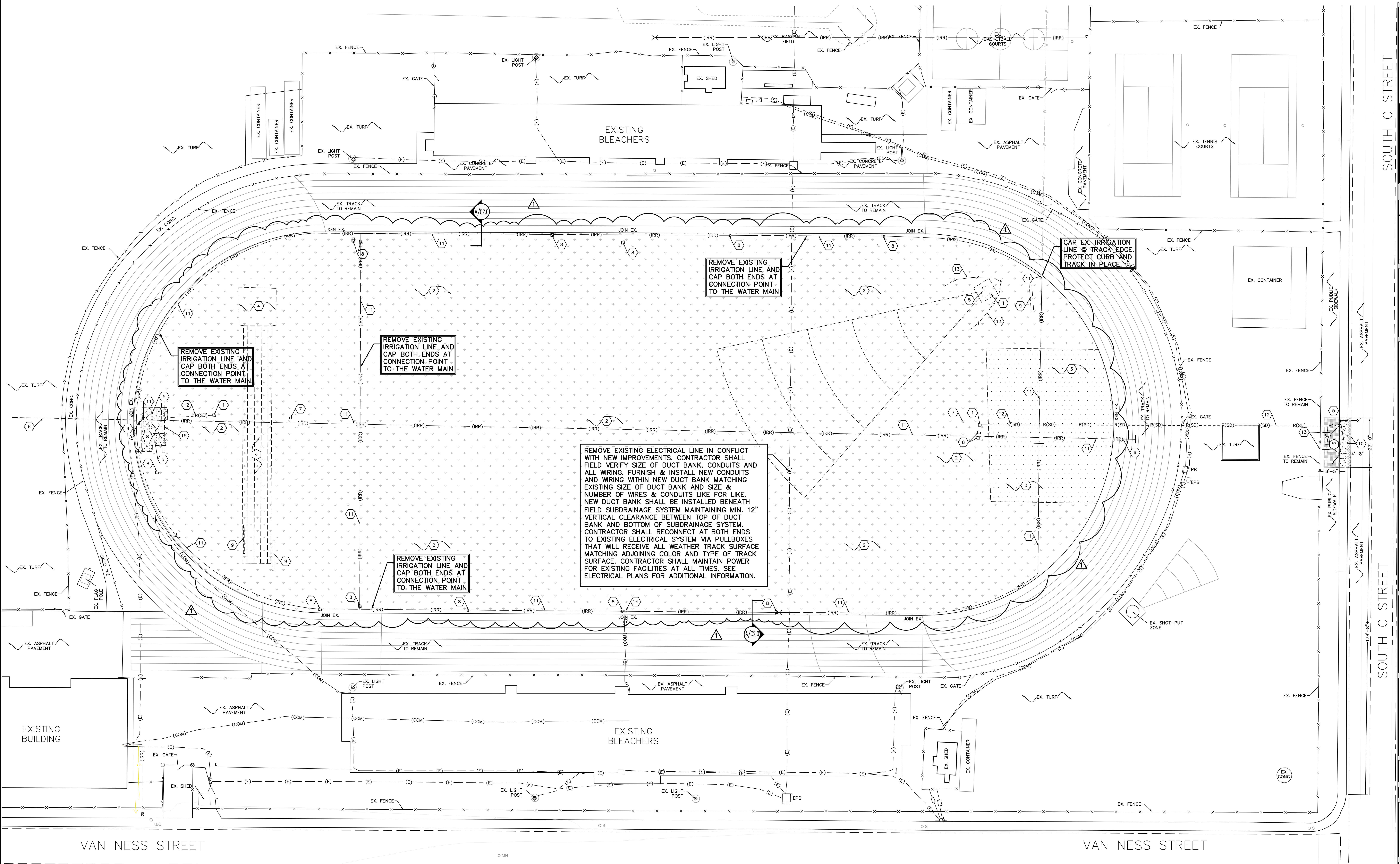
PROJECT NAME: HUENEME HIGH SCHOOL TRACK & FIELD IMPROVEMENTS - INC 1

PROJECT NO.: 6121235302

SHEET TITLE: ADDITIONAL DETAILS

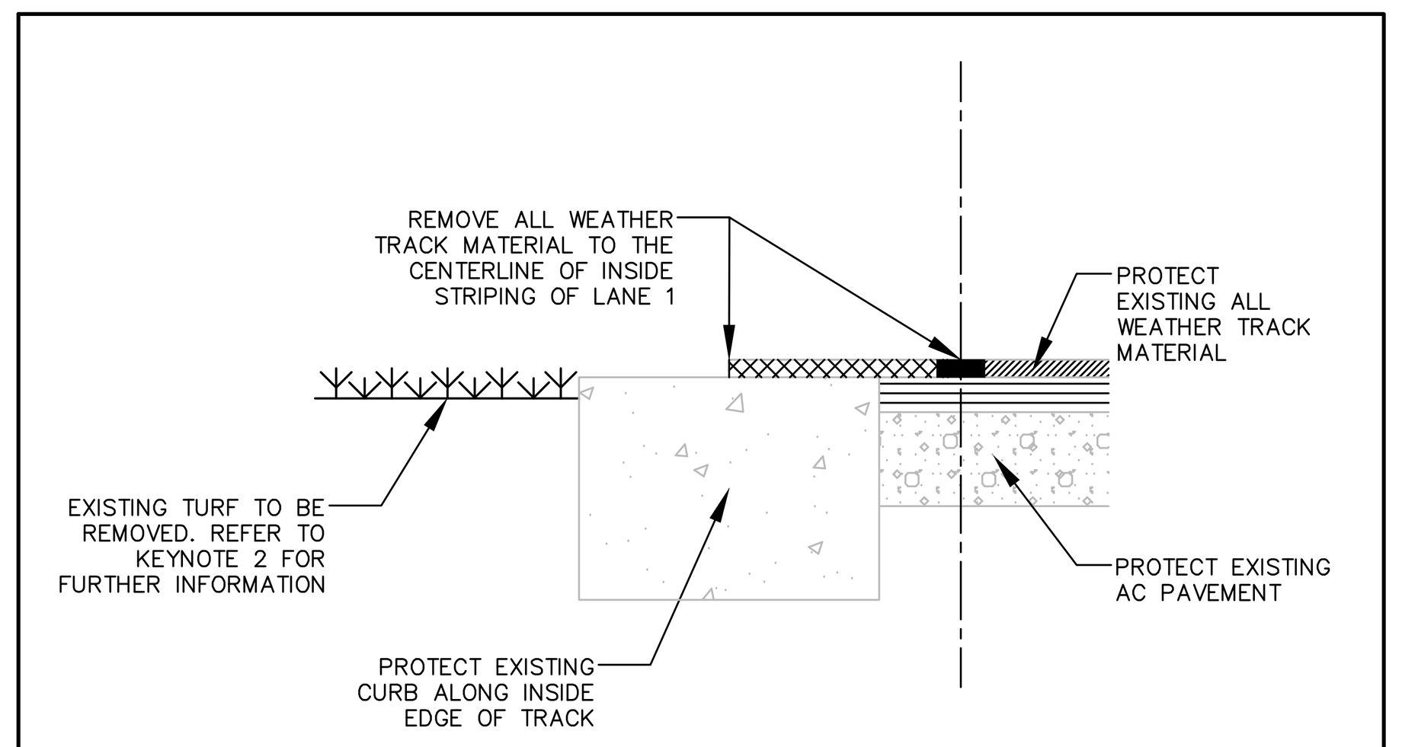
SHEET NUMBER: C1.1

AD1-C1



DEMOLITION KEYNOTES:

1	REMOVE EXISTING STORM DRAIN INLET AND LATERAL AND CAP THE CONNECTION POINT AT THE MAIN (PIPING).	7	REMOVE EXISTING POST AND FOOTING.	14	REMOVE EXISTING ELECTRICAL PEDESTAL AND ALL ASSOCIATED CONDUITS. (REFER TO ELECTRICAL PLANS FOR EXACT SCOPE OF WORK)
2	REMOVE EXISTING VEGETATION, CONCRETE STRUCTURES, PULLBOXES, VAULTS, DIRT AND SAND AREAS WITHIN THE GIVEN VICINITY. IRRIGATION AND CONTROL VALVES NO LONGER IN USE TO BE REMOVED INCLUDING HEADS, LATERAL LINES, MAINLINES, AND ASSOCIATED BOXES AND WIRES PER IRRIGATION PLAN. SEE IRRIGATION PLAN FOR RELATED WORK.	8	REMOVE EXISTING IRRIGATION VALVE, BOX, CONTROL VALVE, AND PIPE AS OCCURS.	15	REMOVE EXISTING SCOREBOARD AND ALL ASSOCIATED FOOTING
3	REMOVE EXISTING TRACK SURFACING, ASPHALT, BASE AND SUBGRADE AS NEEDED.	9	REMOVE EXISTING BLEACHER BENCHES.	16	REMOVE AND DISPOSE EXISTING PLANTING AND IRRIGATION IN THESE AREAS. CUT AND CAP EXISTING MAINLINE WHERE OCCURS, ENSURE THAT REST OF SYSTEM REMAINS FULLY OPERABLE.
4	REMOVE EXISTING JUMP EVENT INCLUDING ALL WEATHER MATERIAL AND SAND PITS, WHERE OCCURS.	10	SAWCUT AND REMOVE EXISTING FULL DEPTH ASPHALT TO THE TOP OF THE BASE LAYER.		
5	SAWCUT AND REMOVE EXISTING CONCRETE PAVEMENT, BASE & SUBGRADE AS NEEDED TO CONSTRUCT THE NEW IMPROVEMENTS AS SHOWN ON SHEET C3.0.	11	REMOVE EXISTING IRRIGATION PIPE.		
6	ABANDON EXISTING IRRIGATION LINE.	12	REMOVE EXISTING STORM DRAIN PIPE & ASSOCAITED FITTINGS.		
		13	REMOVE EXISTING FENCE.		



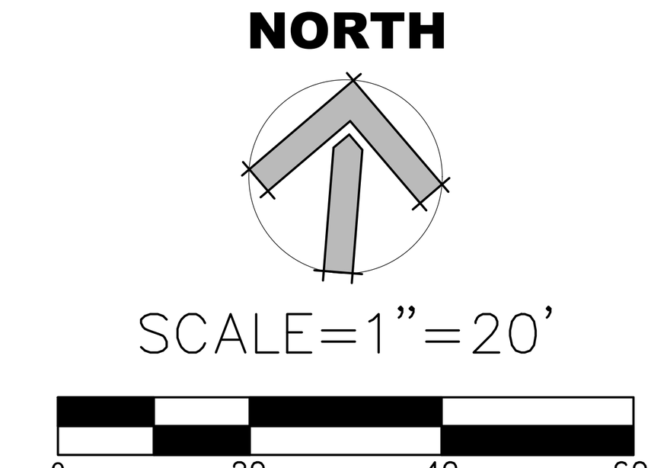
DEMOLITION SECTION A

NOTES:

1. FOR DEMOLITION AT EDGE OF EXISTING TRACK AND EXISTING TURF REFER TO SECTION DETAIL 'A/C2.0.'

LEGEND:

- EX. STORM DRAIN (SD)
- EX. GAS (G)
- EX. ELECTRIC (E)
- EX. WATER (W)
- EX. SEWER (S)
- EX. RECLAIMED WATER (RW)
- REMOVE STORM DRAIN R(SD)
- ABANDON IRRIGATION
- REMOVE SEWER R(S)
- NEW STORM DRAIN SD
- REMOVE IRRIGATION (IRR)



SCALE=1"=20'

AGENCY REVIEW

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CLIENT NAME
OXNARD UNION HIGH SCHOOL DISTRICT

PROJECT NAME
HUENEME HIGH SCHOOL TRACK & FIELD IMPROVEMENTS - INC 1
500 W BARD RD, OXNARD, CA. 93033

CONSULTANT
REGISTERED PROFESSIONAL ENGINEER MAREK BET GOVARGEZ C 81757 EXP. STATE OF CALIFORNIA

SEAL
LICENSED ARCHITECT JAY R. TITTLE NO. C12955 REN. 11-30-19 STATE OF CALIFORNIA

ISSUE FOR
DSA SUBMITTAL

ISSUE DATE
09/23/19

REVISIONS

NO.	REASON	DATE
1	ADDENDUM#1	10/21/19

PROJECT TEAM
PRINCIPAL IN CHARGE
BB
PROJECT MANAGER
BB
DESIGN TEAM
SA, ML, VS, AT

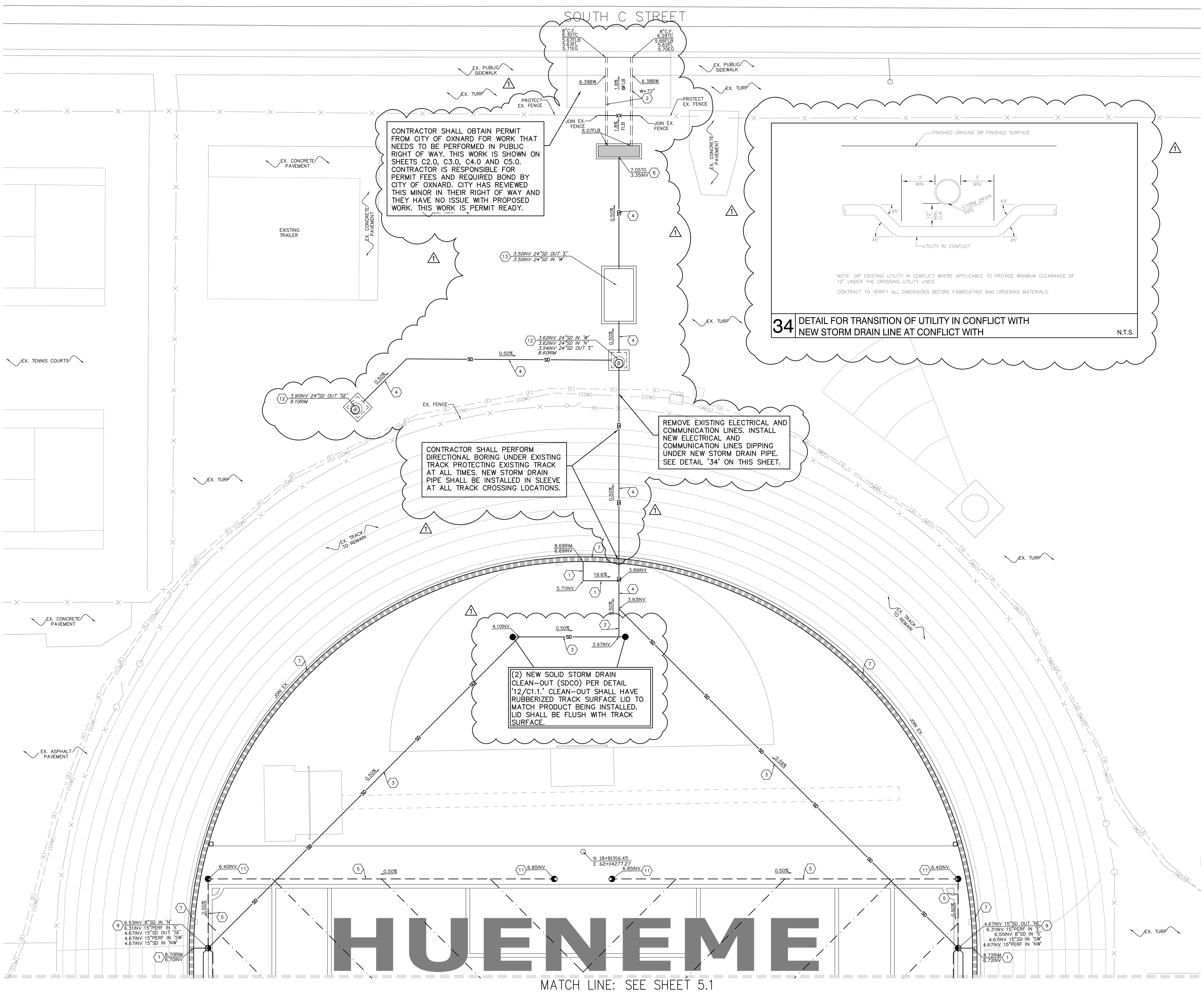
PROJECT NAME
HUENEME HIGH SCHOOL TRACK & FIELD IMPROVEMENTS - INC 1

PROJECT NO.
6121235302

SHEET TITLE
DEMOLITION PLAN

SHEET NUMBER
C2.0

AD1-C2



STORM DRAIN LEGEND:

SD	SOLID STORM DRAIN PIPE
	PERFORATED STORM DRAIN PIPE
	TRACK TRENCH DRAIN
	FLAT PANEL DRAIN
PDCO	PERFORATED DRAIN CLEANOUT AT SYNTHETIC TURF
SPCB	SAND PIT CATCH BASIN
JB	JUNCTION BOX
	CHECK VALVE
	GRATE INLET CATCH BASIN
SD	STORM DRAIN MANHOLE

STORM DRAIN KEYNOTES:

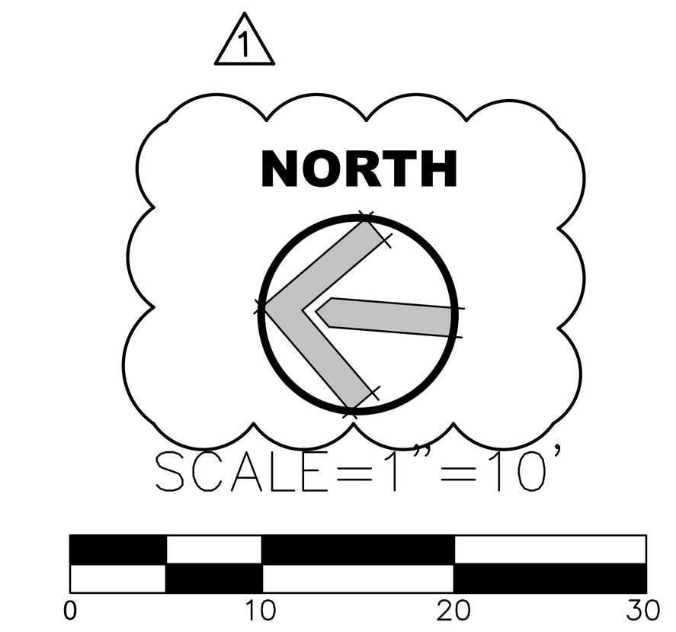
1	NEW 8" HDPE STORM DRAIN PIPE, ADS N-12 WITH WATER-TIGHT JOINTS TYP.	
2	PARKWAY DRAIN PER CITY OF OXNARD PLATE 124. SEE DETAIL FOR 'S' DIMENSION.	17/C1.1
3	NEW 15" HDPE STORM DRAIN PIPE, ADS N-12 WITH WATER-TIGHT JOINTS TYP.	
4	NEW 24" HDPE STORM DRAIN PIPE, ADS N-12 WITH WATER-TIGHT JOINTS TYP.	
5	NEW 15" HDPE PERFORATED STORM DRAIN PIPE, ADS N-12 WITH WATER-TIGHT JOINTS TYP.	
6	NEW SPPWC GRATING CATCH BASIN-ALLEY (TRANSVERSE) PER STANDARD PLAN NO. 305-3. INSTALL 6" DRYWELL WITH 2 GRATES AND 3 ADDITIONAL PER DETAIL '15/C1.1' SLOPE BOTTOM OF CATCH BASIN TO 6" DIAMETER DRYWELL OPENING.	15/C1.1
7	NEW TRACK TRENCH DRAIN	2/C1.1
8	NEW FLAT PANEL DRAIN	6/C1.1
9	NEW JUNCTION BOX (JB) PER DETAIL '9/C1.1' OR NEW NYLOPLAST BASIN, INLINE DRAIN OR ENDLINE DRAIN. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER'S REVIEW AND APPROVAL PRIOR TO ORDERING MATERIAL.	9/C1.1
10	NEW SAND PIT CATCH BASIN (SPCB) PER DETAIL '14/C1.1' OR NYLOPLAST ENDLINE DRAIN. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER'S REVIEW AND APPROVAL PRIOR TO ORDERING MATERIAL.	14/C1.1
11	NEW PERFORATED DRAIN CLEAN-OUT AT SYNTHETIC TURF (PDCO)	12/C1.1
12	NEW STORM DRAIN MANHOLE PIPE-TO-PIPE PER S.P.P.W.C. STD. PLAN NO. 321-2.	
13	TWO (2) NEW DEBRIS SEPARATING BAFFLE BOX, BIOCLEAN PRODUCT, MODEL DSBB-8-14. INSTALL PER MANUFACTURER'S INSTALLATION GUIDELINES. SUBMIT SHOP DRAWINGS FOR ENGINEER'S REVIEW AND APPROVAL PRIOR TO ORDERING MATERIAL.	

NOTES:

ALL PIPES UNDER NEW TRACK TO BE INSTALLED WITHIN SLEEVES.

NOTES:

1. CONTRACTOR TO FIELD VERIFY LOCATION, SIZE, AND DEPTH OF EXISTING UTILITY LINES RUNNING THROUGH THE WORK AREA IN ORDER TO DETERMINE WHETHER THE UTILITIES WILL CONFLICT WITH PROPOSED IMPROVEMENTS. IF THE UTILITIES ARE DETERMINED TO BE IN CONFLICT, CONTRACTOR SHALL CONTACT.
2. CONTRACTOR SHALL RESTORE THE PAVEMENT, CURB, CURB & GUTTER, FENCING, LANDSCAPE OR TURF LIKE FOR LIKE WHERE STORM DRAIN PIPING TRENCHING OCCURS.
3. WHEN TRANSITIONING TO A SMALLER DIAMETER PIPE, PROVIDE AN ECCENTRIC REDUCING FITTING TO MINIMIZE THE GRADE CHANGE ACROSS THE FITTING. SEE DETAIL 11 ON SHEET C1.1.
4. PROVIDE ALL NECESSARY FITTINGS TO COMPLETE THE WORK.
5. WHERE EXISTING WATER OR GAS PIPING ARE IN CONFLICT WITH PROPOSED SUBSURFACE DRAINAGE SYSTEM FOR FIELD OR STORM DRAIN PIPING CONTRACTOR SHALL LOWER GAS OR EXISTING WATER PIPING AND CROSS THEM UNDER STORM DRAIN PIPING WITH MINIM 12" CLEARANCE BETWEEN TOP OF WATER OR GAS PIPE TO BOTTOM OF STORM DRAINAGE PIPING AND SYSTEM.



AGENCY REVIEW

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CLIENT NAME

OXNARD UNION HIGH SCHOOL DISTRICT

PROJECT NAME

HUENEME HIGH SCHOOL TRACK & FIELD IMPROVEMENTS - INC 1

500 W BARD RD. OXNARD, CA. 93033

CONSULTANT

SEAL

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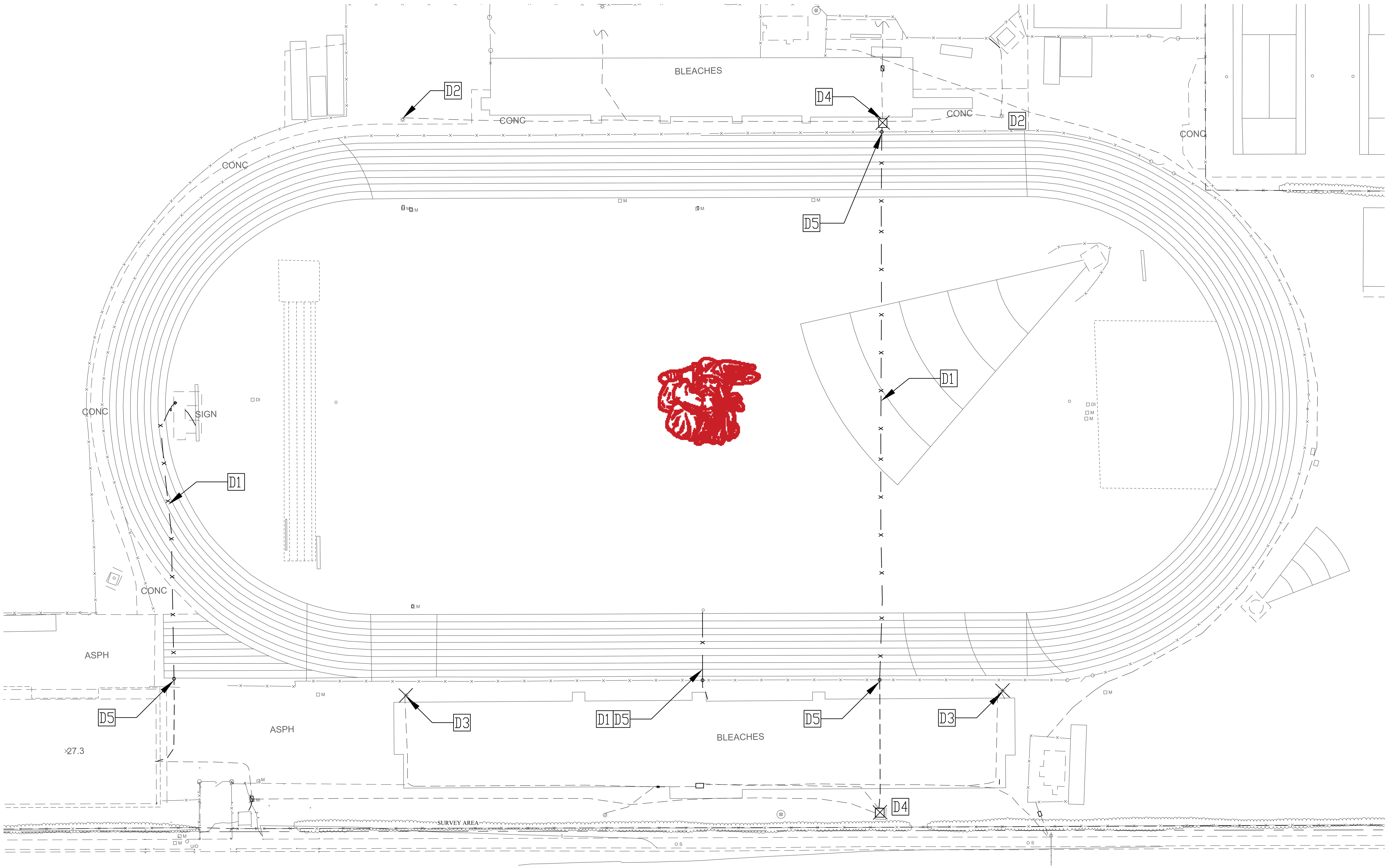
PROJECT NO.
6121235302

SHEET TITLE
STORM DRAIN PLAN

SHEET NUMBER
C5.0

AD1-C3



ENLARGED ELECTRICAL SITE PLAN - TRACK & FIELD

SCALE: 1"=20'-0" | 1

DEMOLITION GENERAL NOTES

1 EXISTING CONDITIONS SHOWN ARE FROM AVAILABLE RECORDS AND SITE INVESTIGATION AS LIMITED BY STRUCTURAL CONDITIONS.

2 ANY CONDUITS AND EQUIPMENT STILL REQUIRED TO BE IN USE FOR THE BUILDING OPERATION SHALL BE REPAIRED AS NEEDED PRIOR TO BEGINNING NEW WORK.

3 ANY LIVE CONDUITS OR SERVICES SHALL BE DE-ENERGISED AND TERMINATED OR REROUTED PRIOR TO BEGINNING OF NEW WORK.

4 ANY WORK THAT REQUIRES ANY ELECTRICAL, LOW VOLTAGE, MECHANICAL, COMMUNICATION OR FIRE ALARM SERVICES TO BE SHUT OFF TO ANY AREA OR SHALL BE COORDINATED WITH THE SCHOOL DISTRICT AND SCHEDULED FOR NON SCHOOL HOURS.

DEMOLITION PLAN KEYED NOTES (NOT ALL MAY APPLY)

D1 ELECTRICAL CONTRACTOR SHALL VERIFY LOCATION AND SIZING OF EXISTING JUNCTION BOXES, CONDUITS, AND CONDUCTORS, PRIOR REMOVING AND DEMOLISHING FROM EXISTING AREA.

D2 EXISTING LIGHT POLE TO BE RETROFITTED WITH LED POLE. CONTRACTOR SHALL VERIFY EXISTING CONDITION AND NEW REQUIREMENTS WITH DISTRICT, PRIOR BID/CONSTRUCTION.

D3 EXISTING LIGHT POLE TO BE REMOVED FROM EXISTING LOCATION AND CONDUITS/CONDUCTORS TO BE STUBBED OUT FOR NEW WORK.

D4 EXISTING PULL BOXES #7 & #8 TO BE REMOVED.

D5 DEMOLISH EXISTING CONDUIT AND CONDUCTOR AND STUB OUT FOR NEW WORK.

DEMO PLAN NOTES

SCALE: NONE

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DESIGN DEVELOPMENT

10/21/19

NO.	REASON	DATE
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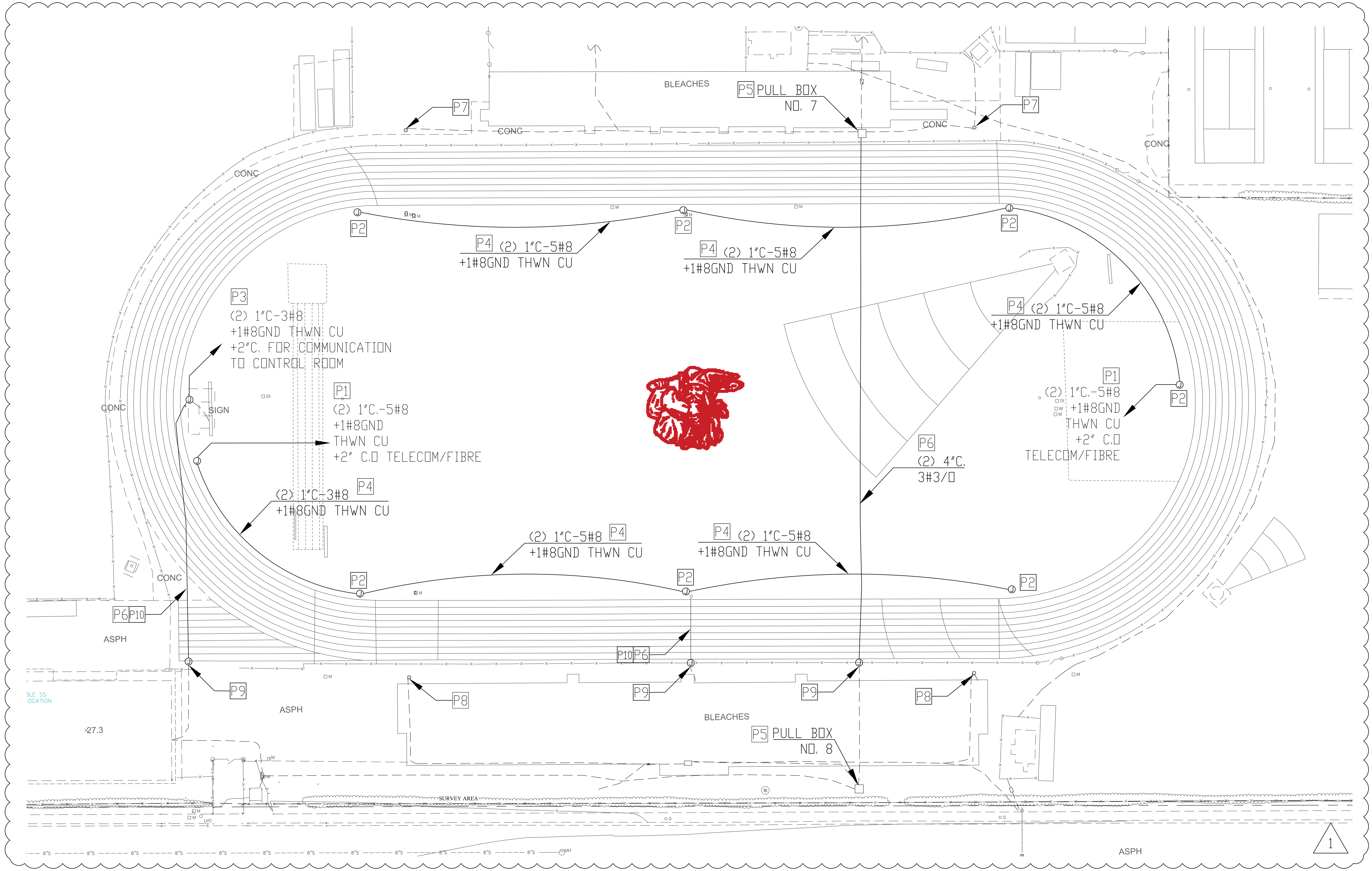
PRINCIPAL IN CHARGE
B.E.S.
PROJECT MANAGER
A.O.
DESIGN TEAM
J.H.

HUENEME HIGH SCHOOL TRACK & FIELD IMPROVEMENTS - INC 1

ENLARGED ELECTRICAL DEMO SITE PLAN - TRACK & FIELD

1

ED-200
AD1-E1



ENLARGED ELECTRICAL SITE PLAN - TRACK & FIELD

SCALE: 1"=20'-0" | 1

POWER GENERAL NOTES

1. ALL CONDUITS SHALL BE RUN NEATLY AND PARALLEL OR PERPENDICULAR TO STRUCTURAL MEMBERS. CONDUIT ROUTING SHOWN ON PLAN IS DIAGRAMMATIC AND IS INTENDED TO SHOW POSSIBLE FUNCTIONAL ROUTE OF CONDUITS AND CONDUCTORS. IN SOME CASES THE DRAWING SHOWS ROUTING WHICH MAY NOT BE PARALLEL OR PERPENDICULAR TO BUILDING STRUCTURAL MEMBERS, THIS IS FOR CLARITY OF CIRCUITING AND NOT INTENDED TO APPROVE ANY DEVIATION FROM NEAT WORKMANSHIP.
2. COMBINING OF HOMERUNS AND OTHER CIRCUITS OTHER THAN WHAT IS SHOWN ON PLAN WILL NOT BE APPROVED.
3. CONDUITS AND ROUTING FOUND OBJECTIONABLE BY THE ARCHITECT WILL BE REWORKED AT ELECTRICAL CONTRACTORS EXPENSE.
4. ELECTRICAL CONTRACTOR SHALL PROVIDE APPROVED SEISMIC STRUCTURAL SUPPORTS AS CURRENTLY ADOPTED BY IBC OR CBC WHERE APPLICABLE FOR ALL FIXTURES, BOXES AND OTHER ELECTRICAL EQUIPMENT.
5. ELECTRICAL CONTRACTOR SHALL VERIFY LOCATIONS AND MOUNTING HEIGHTS OF ALL OUTLETS AND EQUIPMENT WITH ARCHITECTURAL PLANS, ELEVATIONS AND DETAILS.

POWER PLAN KEYED NOTES (NOT ALL MAY APPLY)

P1 (2) 1"C. 5#8+1#8GND THWN CU +2" CONDUIT FOR TELELCOM./FIBER USE TO NEAREST POWER PANEL. CONDUITS SHALL BE BURIED 24" BELOW GRADE ENCASED IN CONCRETE. CONTRACTOR SHALL VERIFY EXISTING UNDERGROUND CONDUITS TO BE USED OR INTERCEPTED TO CLOSEST POWER PANEL, IF POSSIBLE, PRIOR BID/CONSTRUCTION.

P2 NEW JUNCTION BOXES TO BE INSTALLED BELOW GRADE OUTDOOR RATED WITH RUBBERIZED TRACK SURFACE MATCHING EXISTING TYPE AND COLOR OF THE TRACK. CONTRACTOR SHALL VERIFY DISTRICT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

P3 (2) 1"C-3#8+1#8GND THWN CU +2" CONDUIT FOR SCOREBOARD COMMUNICATION USE, TO NEAREST POWER PANEL. CONDUITS SHALL BE BURIED 24" BELOW GRADE ENCASED IN CONCRETE.

P4 (2) 1"C-5#8+1#8GND THWN CU +2" FIBER BETWEEN JUNCTION BOXES. CONDUITS SHALL BE BURIED 24" BELOW GRADE. CONTRACTOR SHALL VERIFY EXISTING UNDERGROUND CONDUITS TO BE USED OR INTERCEPTED, IF POSSIBLE, PRIOR BID/CONSTRUCTION.

P5 NEW PULL BOXES TO BE INSTALLED TO REPLACE PULL BOXES #7 & #8. PULL BOXES SHALL BE BURIED 24" BELOW GRADE ENCASED IN CONCRETE

P6 NEW CONDUCTORS/CONDUITS TO BE BURIED 24" BELOW GRADE ENCASED IN CONCRETE. SIZING AND QUANTITIES OF NEW CONDUITS AND CONDUCTORS SHALL BE VERIFIED BASED UPON EXISTING.

P7 EXISTING LIGHT POLE TO BE RETROFITTED WITH LED POLE. CONTRACTOR SHALL VERIFY EXISTING CONDITION AND NEW REQUIREMENTS WITH DISTRICT PRIOR BID/CONSTRUCTION.

P8 NEW LIGHT POLE TO REPLACE EXISTING AT PROPOSED LOCATION. CONTRACTOR SHALL VERIFY EXISTING CONDUCTOR/CONDUIT SIZING AND QUANTITIES BASED UPON EXISTING. EXISTING CONDUITS/CONDUCTORS TO BE REUSED, IF EXISTING REQUIREMENTS MATCH REQUIREMENTS FOR NEW LIGHT POLE. CONTRACTOR SHALL VERIFY LIGHT POLE SPECIFICATION AND INSTALLATION LOCATION WITH DISTRICT PRIOR BID/CONSTRUCTION.

P9 INTERCEPT NEW CONDUITS AND CONDUCTORS WITH EXISTING CONDUCTORS AND CONDUITS.

P10 CONTRACTOR SHALL VERIFY EXACT LOCATION, SIZING, AND QUANTITIES OF PREEXISTING CONDUCTORS/CONDUITS TO PROCEED INSTALLATION OF NEW CONDUITS/CONDUCTORS.

1

POWER PLAN NOTES

SCALE: NONE

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IMPROVEMENTS - INC 1

ENLARGED ELECTRICAL
SITE PLAN - TRACK & FIELD

E-200

AD1-E2