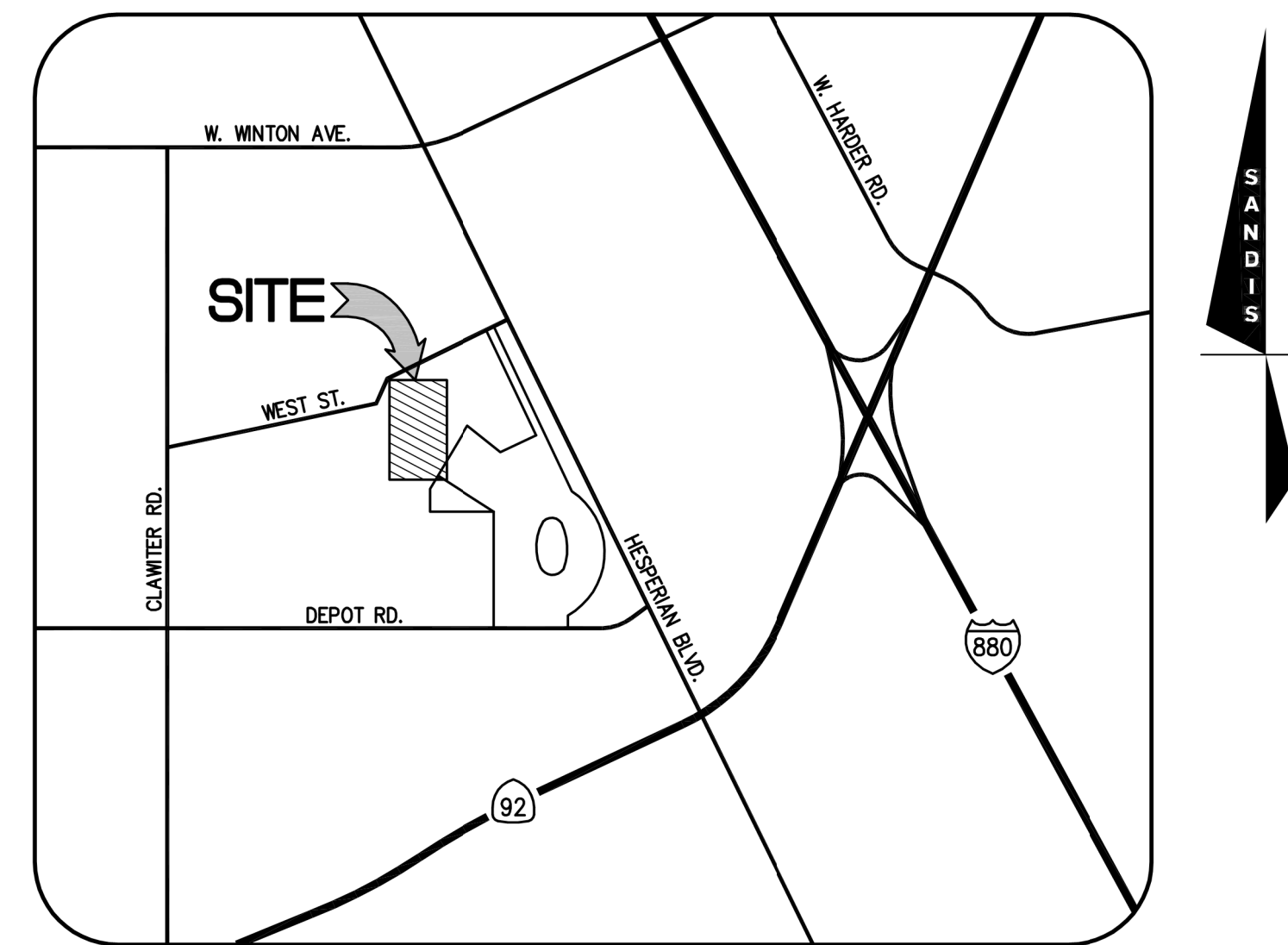


CHABOT-LAS POSITAS COMMUNITY COLLEGE DISTRICT CHABOT COLLEGE

25555 HESPERIAN BLVD, HAYWARD, CA 94545

FIRE WATER UPGRADE PROJECT DSA # 01-120049 DSA SUBMITTAL MARCH 24, 2022



VICINITY MAP
N.T.S.

APPLICABLE CODES AND REGULATIONS

*PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2020**
 2019 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR*
 2019 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR
 (2018 INTERNATIONAL BUILDING CODE, VOL. 1 & 2, AND 2019 CALIFORNIA AMENDMENTS)
 2019 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR
 (2017 NATIONAL ELECTRICAL CODE AND 2019 CALIFORNIA AMENDMENTS)
 2019 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR
 (2018 IAPMO UNIFORM MECHANICAL CODE AND 2019 CALIFORNIA AMENDMENTS)
 2019 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR
 (2018 IAPMO UNIFORM PLUMBING CODE AND 2019 CALIFORNIA AMENDMENTS)
 2019 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR
 2019 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR
 (2018 INTERNATIONAL FIRE CODE AND 2019 CALIFORNIA AMENDMENTS)
 2019 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR
 (2018 INTERNATIONAL EXISTING BUILDING CODE AND 2019 CALIFORNIA AMENDMENTS)
 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 CCR
 2019 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR
 TITLE 19 CCR: PUBLIC SAFETY: STATE FIRE MARSHAL REGULATIONS
 2016 ASME A17.1/CSA B44-13 SAFETY CODE FOR ELEVATORS AND ESCALATORS (PER 2019 CBC PART 2 CH 35)
 NOTE: * CAL/OSHA ELEVATOR UNIT ENFORCES CCR TITLE 8 AND USES THE 2004 ASME A17.1 BY ADOPTION

PARTIAL LIST OF APPLICABLE STANDARDS
 NFPA 13 – STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS (CA AMENDED).....2016 EDITION
 NFPA 14 – STANDARD FOR THE INSTALLATION OF STANDPIPE AND HOSE SYSTEMS (CA AMENDED).....2016 EDITION
 NFPA 17 – STANDARD FOR DRY CHEMICAL EXTINGUISHING SYSTEMS.....2017 EDITION
 NFPA 17A – STANDARD FOR WET CHEMICAL EXTINGUISHING SYSTEMS.....2017 EDITION
 NFPA 20 – STANDARD FOR THE INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION.....2016 EDITION
 NFPA 22 – STANDARD FOR WATER TANKS FOR PRIVATE FIRE PROTECTION.....2013 EDITION
 NFPA 24 – STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND
 THEIR APPURTENANCES (CA AMENDED).....2016 EDITION
 NFPA 72 – NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED).....2016 EDITION
 NFPA 80 – STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES.....2016 EDITION
 NFPA 2001 – STANDARD ON CLEAN AGENT FIRE EXTINGUISHING SYSTEMS (CA AMENDED).....2015 EDITION
 UL 300 – STANDARD FOR FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR
 PROTECTION OF COMMERCIAL COOKING EQUIPMENT.....2005 (R2010)
 UL 464 – AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS,
 INCLUDING ACCESSORIES.....2003 EDITION
 UL 521 – STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS.....1999 EDITION
 UL 1971 – STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED.....2002 (R2010)
 ICC 300 – STANDARD FOR BLEACHERS, FOLDING AND TELESCOPIC SEATING, AND GRANDSTANDS.....2017 EDITION

FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2019 CBC (SFM) CHAPTER 35 AND CALIFORNIA FIRE CODE CHAPTER 80.
 SEE CALIFORNIA BUILDING CODE CHAPTER 35 FOR STATE OF CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS.

*ALL PARTS OF THE 2019 CALIFORNIA BUILDING CODE BECOME EFFECTIVE JANUARY 1, 2020 EXCEPT THE EFFECTIVE DATE FOR THE USE OF THE 2019 BUILDING ENERGY EFFICIENCY STANDARDS (TITLE 24, PART 1, CHAPTER 10) IS JANUARY 8, 2019 AND THE EFFECTIVE DATE FOR THE USE OF THE CALIFORNIA ADMINISTRATIVE CODE (TITLE 24, PART 1, CHAPTER 4) IS JANUARY 8, 2019.

PROJECT DESCRIPTION

CHABOT FIRE WATER UPGRADE PROJECT PROPOSES TO INSTALL A NEW FIRE WATER LINE LINKING THE MAIN CAMPUS FIRE WATER NETWORK TO THE BASEBALL LATERAL OFF OF WEST STREET. PROJECT SHALL CONSIST OF UTILITY INSTALLATION AND SURFACE RESTORATION.

SHEET INDEX

- C-001 COVER SHEET
- C-001 NOTES, LEGEND, AND ABBREVIATIONS
- C-002 KEY MAP
- C-101 TOPOGRAPHIC SURVEY
- C-102 TOPOGRAPHIC SURVEY
- C-103 TOPOGRAPHIC SURVEY
- C-104 TOPOGRAPHIC SURVEY
- C-105 TOPOGRAPHIC SURVEY
- C-201 UTILITY PLAN AND PROFILE
- C-202 UTILITY PLAN AND PROFILE
- C-203 UTILITY PLAN AND PROFILE
- C-204 UTILITY PLAN AND PROFILE
- C-205 UTILITY PLAN AND PROFILE
- C-301 CONSTRUCTION DETAILS
- C-302 CONSTRUCTION DETAILS

PROJECT DIRECTORY

OWNER INFO

CHABOT-LAS POSITAS CCD
 CONTACT PERSON: MICHAEL GARR
 7600 DUBLIN BLVD
 DUBLIN, CA 94568
 PH: 510.723.7637
 EMAIL: MGARR@CLPCCD.ORG

CIVIL ENGINEER

SANDIS
 CONTACT PERSON: BRIAN CANCIMILLA
 636 9TH STREET
 OAKLAND, CA 94607
 PH: 510.873.8866

IDENTIFICATION STAMP
 DIV. OF THE STATE ARCHITECT
 APP: 01-120049 INC:
 REVIEWED FOR
 SS FLS ACS
 DATE: 06/24/22

DATE 6/15/2022

REGISTERED PROFESSIONAL ENGINEER
 MICHAEL A. KUYKENDALL
 No. 70870
 Exp. 6/30/23
 CIVIL
 STATE OF CALIFORNIA
 MICHAEL A. KUYKENDALL
 R.C.E. NO. 70870, EXPIRES 6-30-23

CHABOT COLLEGE
 FIRE WATER
 UPGRADE PROJECT
 HAYWARD
 CALIFORNIA



No.	REVISION	DATE	BY

COVER SHEET

DATE: 03/24/2022

SCALE:

DRAWN BY: JME

APPROVED BY: MK

DRAWING NO.:

618201.D

SHEET

G-001

1 OF 15 SHEETS

LEGEND

Table with columns for EXISTING and PROPOSED symbols and descriptions for various construction elements like retaining walls, pavement, gutters, pipes, and electrical lines.

ABBREVIATIONS

Table listing abbreviations for materials and construction terms such as aggregate base, asphalt concrete, area drain, and various pipe types.

CONSTRUCTION NOTES

- List of 22 numbered construction notes detailing requirements for off-site construction, safety, utility marking, and site management.

ADA NOTES

- List of 8 numbered ADA notes regarding site work conformance, curb ramps, travel paths, and ground finishes.

TRENCHLESS INSTALLATION

Text describing trenchless installation methods, including directional drilling and requirements for fire water main installation.

BASIS OF DESIGN

Text explaining the basis of design for the project, including assumptions about existing conditions and utility locations.

UTILITY NOTES

- List of 6 utility notes detailing requirements for photographing existing conditions, joint restraint, and utility verification.

DISCREPANCIES

Text explaining the procedure for handling discrepancies between drawings and existing conditions.

HAZARDOUS MATERIALS NOTE

Note regarding asbestos-containing materials and the contractor's responsibility to identify and manage them.

UTILITY/POTHOLE NOTE

Note detailing the types, locations, sizes, and depths of existing underground utilities as shown on the drawings.

BENCHMARK NOTE

Note providing information about the benchmark used for the survey, including its location and elevation.

BOUNDARY NOTE

Note describing the legal description and location of the project boundary based on county records.

UNAUTHORIZED CHANGES AND USES

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans.

Professional Engineer identification stamp for Michael A. Kuykendall, State of California, License No. 70870.

Project information including date (6/15/2022), drawing title (C-001), and sheet number (2 OF 15).

Vertical title block for 'CHABOT COLLEGE FIRE WATER UPGRADE PROJECT' in Hayward, California.



Revision table with columns for No., REVISION, DATE, and BY, containing one revision entry.

NOTES, LEGEND, AND ABBREVIATIONS

Project details including date (03/24/2022), scale, drawing by (JME), approved by (MK), and drawing number (618201.D).

Sheet information including the sheet number 'C-001' and total sheets '2 OF 15 SHEETS'.



Vertical text on the left margin: 'NO PART OF THIS DOCUMENT MAY BE REPRODUCED IN ANY FORM INCLUDING PHOTOCOPY, RECORDING OR ANY INFORMATION RETRIEVABLE AND STORAGE SYSTEM, WITHOUT PERMISSION IN WRITING FROM SANDIS.'

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CHABOT COLLEGE
FIRE WATER
UPGRADE PROJECT
HAYWARD CALIFORNIA

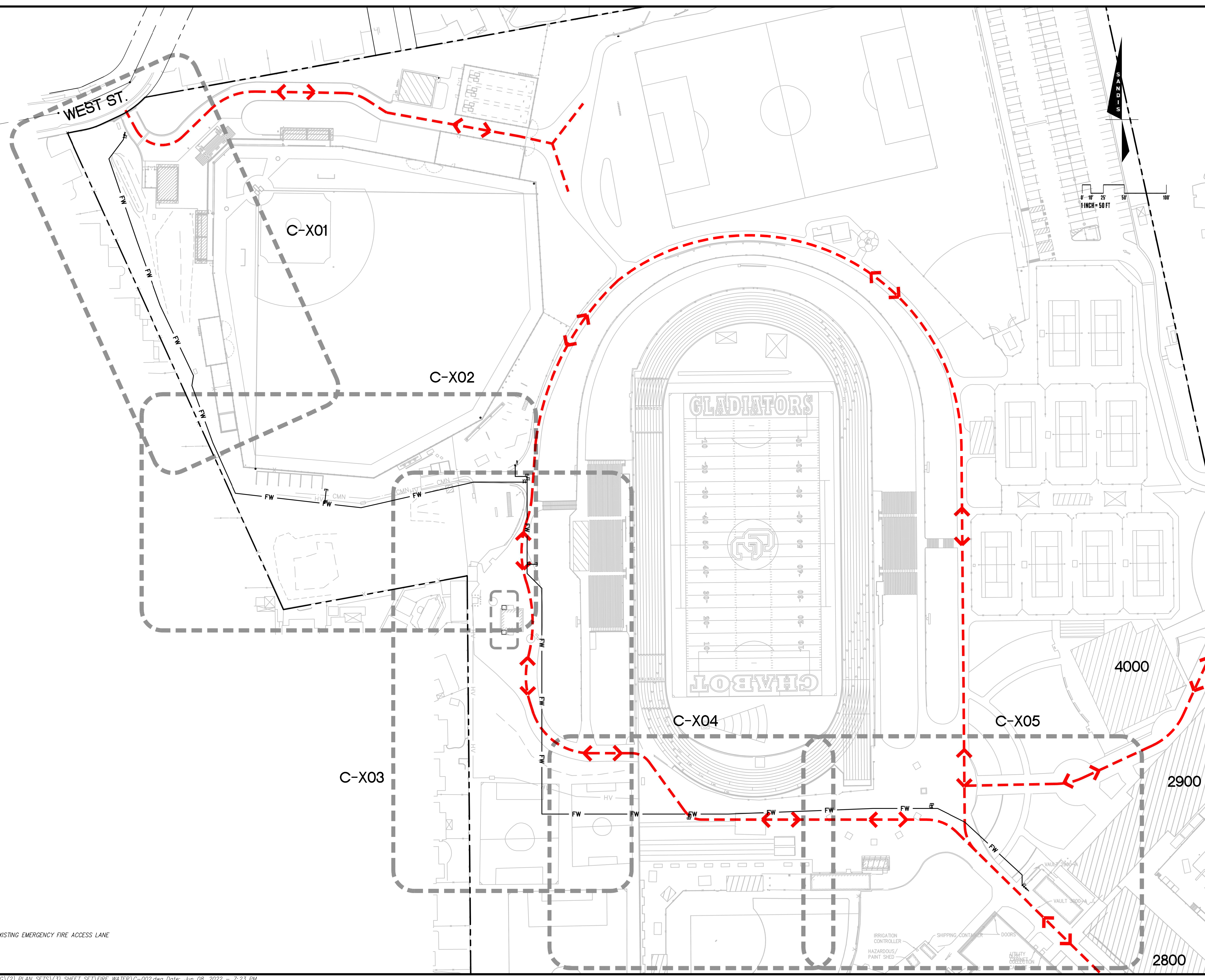


No.	REVISION	DATE	BY

KEY MAP

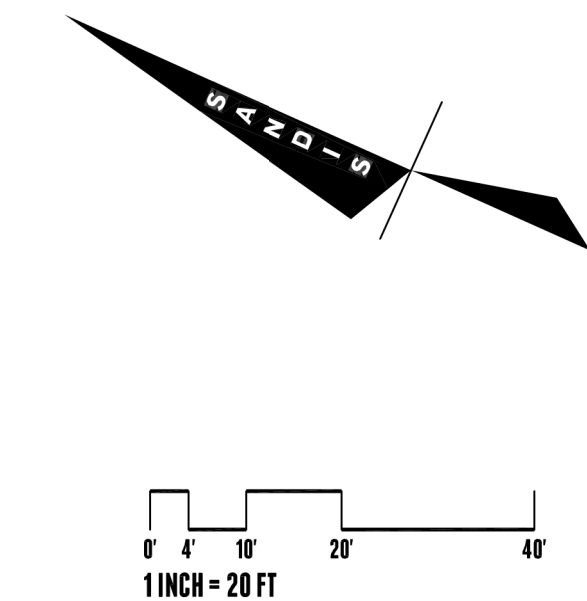
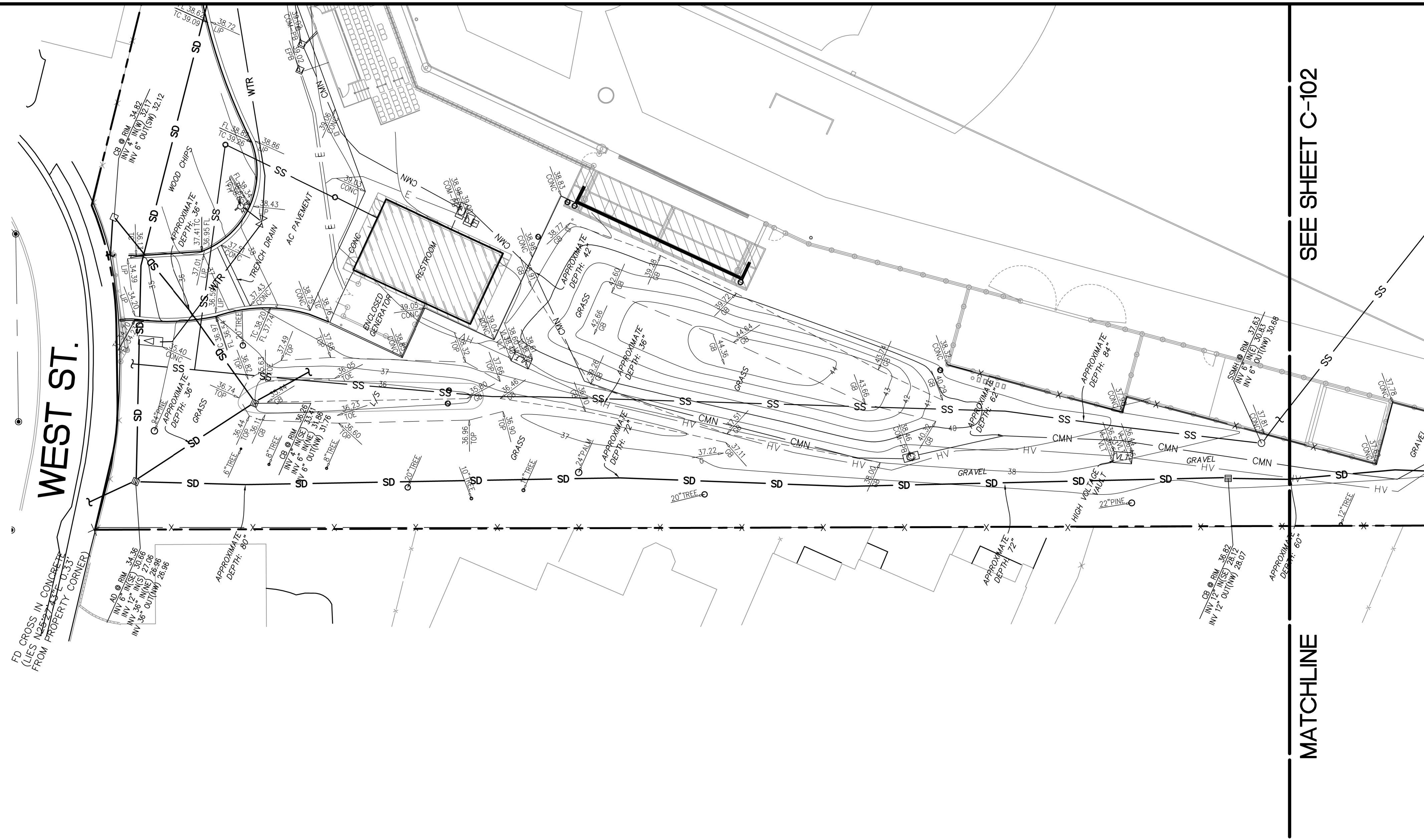
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SCALE:
DRAWN BY: JME
APPROVED BY: MK
DRAWING NO.: 618201.D

SHEET
C-002
3 OF 15 SHEETS



LEGEND
← - - - →
EXISTING EMERGENCY FIRE ACCESS LANE

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GENERAL NOTE

CONTRACTOR SHALL CONDUCT FIELD INVESTIGATIONS, AS REQUIRED, TO VERIFY THE LOCATION AND ELEVATION OF EXISTING SUBSURFACE IMPROVEMENTS AND UTILITIES (WHETHER SHOWN ON THE PLANS OR NOT) PRIOR TO THE COMMENCEMENT OF WORK. CONTRACTOR SHALL NOTIFY THE CIVIL DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS IN THE FIELD AND INFORMATION SHOWN ON THESE PLANS.

SURVEY NOTE

ADDITIONAL BACKGROUND INFORMATION IS SHOWN ON THIS SHEET FROM A VARIETY OF SOURCES INCLUDING A TOPOGRAPHIC SURVEY PERFORMED BY SANDIS IN 2021, DESIGN LINEWORK FROM RECORD DRAWINGS DATED MAY 2010, AND A COMPOSITE UTILITY SURVEY PERFORMED BY SANDIS IN 2012 AND UPDATED IN 2021.

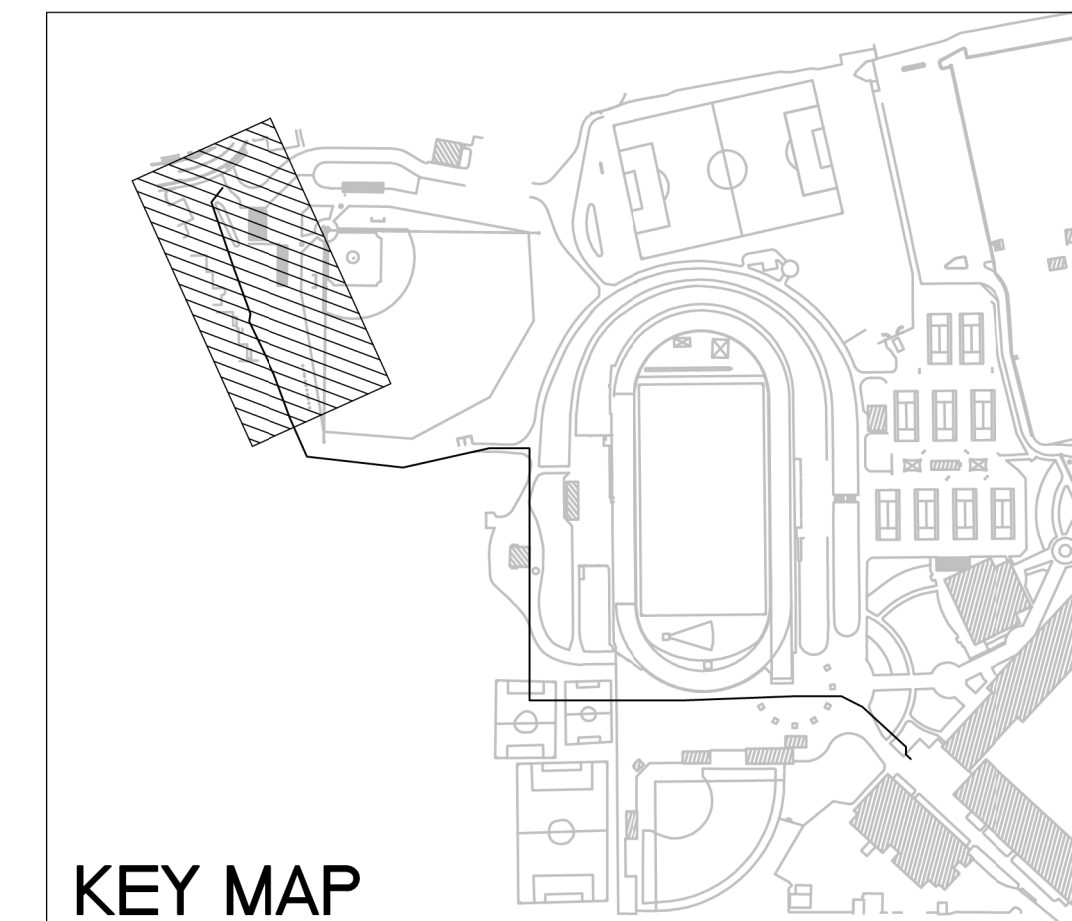
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CHABOT COLLEGE
FIRE WATER
UPGRADE PROJECT
 HAYWARD CALIFORNIA



No.	REVISION	DATE	BY

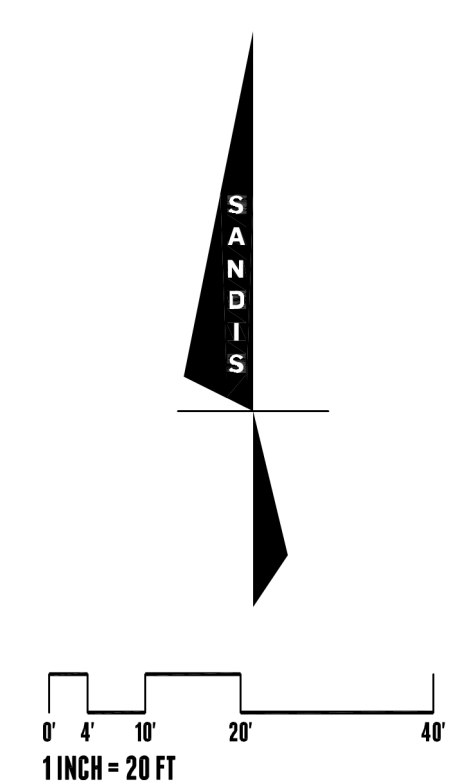
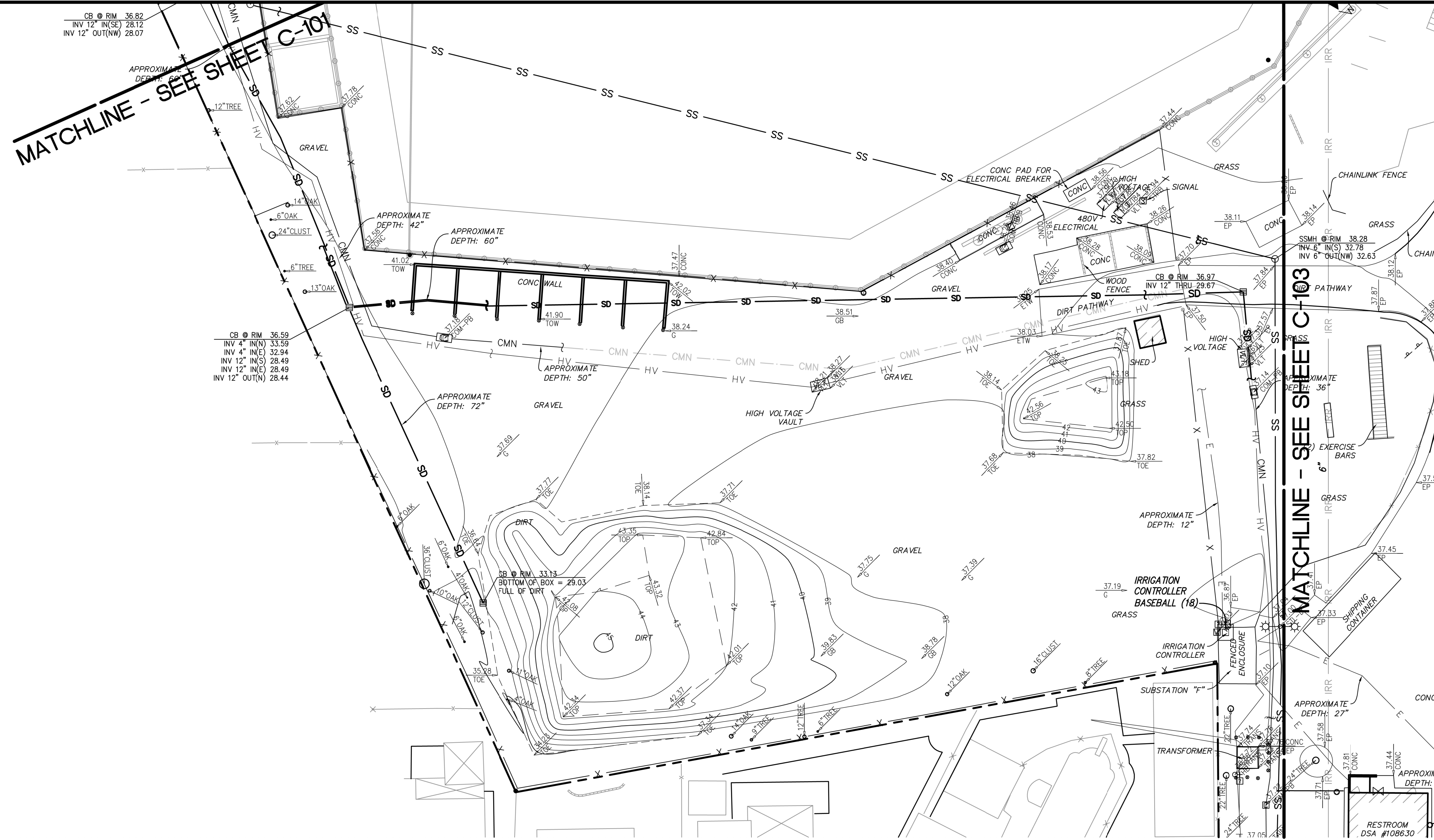


TOPOGRAPHIC SURVEY

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SHEET
C-101
4 OF 15 SHEETS

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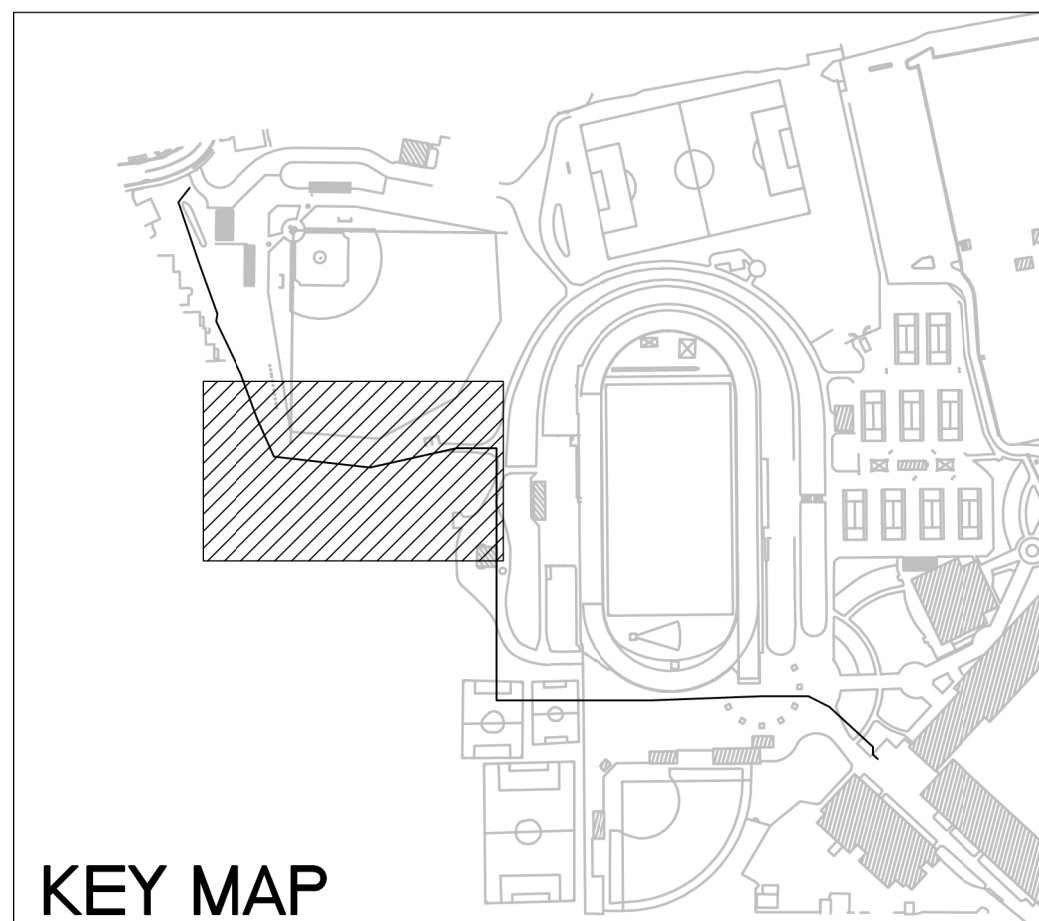
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CHABOT COLLEGE
FIRE WATER
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No.	REVISION	DATE	BY

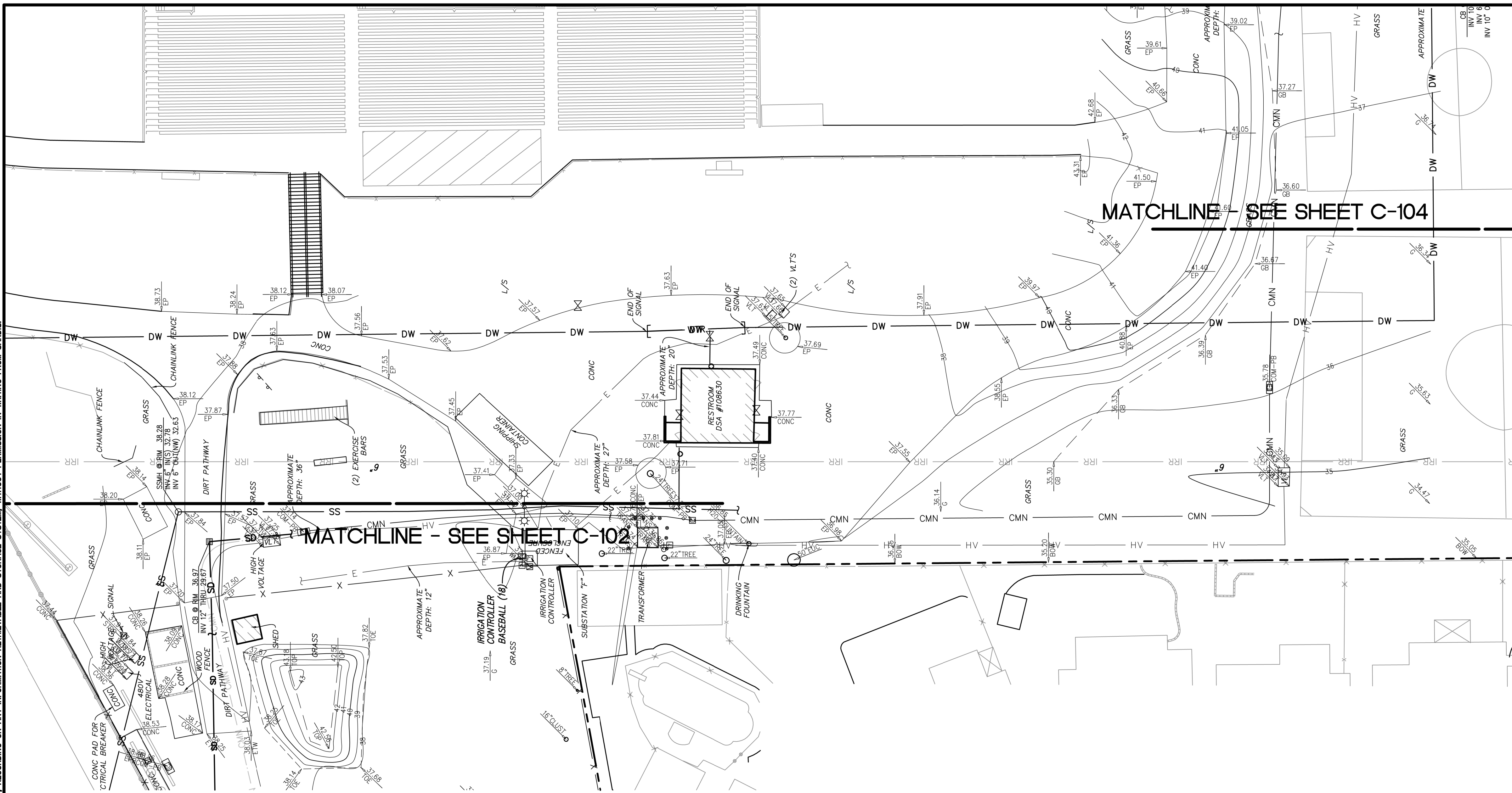


TOPOGRAPHIC SURVEY

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 APPROVED BY: MK
 DRAWING NO.: 618201.D

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C-102
 5 OF 15 SHEETS

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CHABOT COLLEGE
FIRE WATER
UPGRADE PROJECT
HAYWARD CALIFORNIA

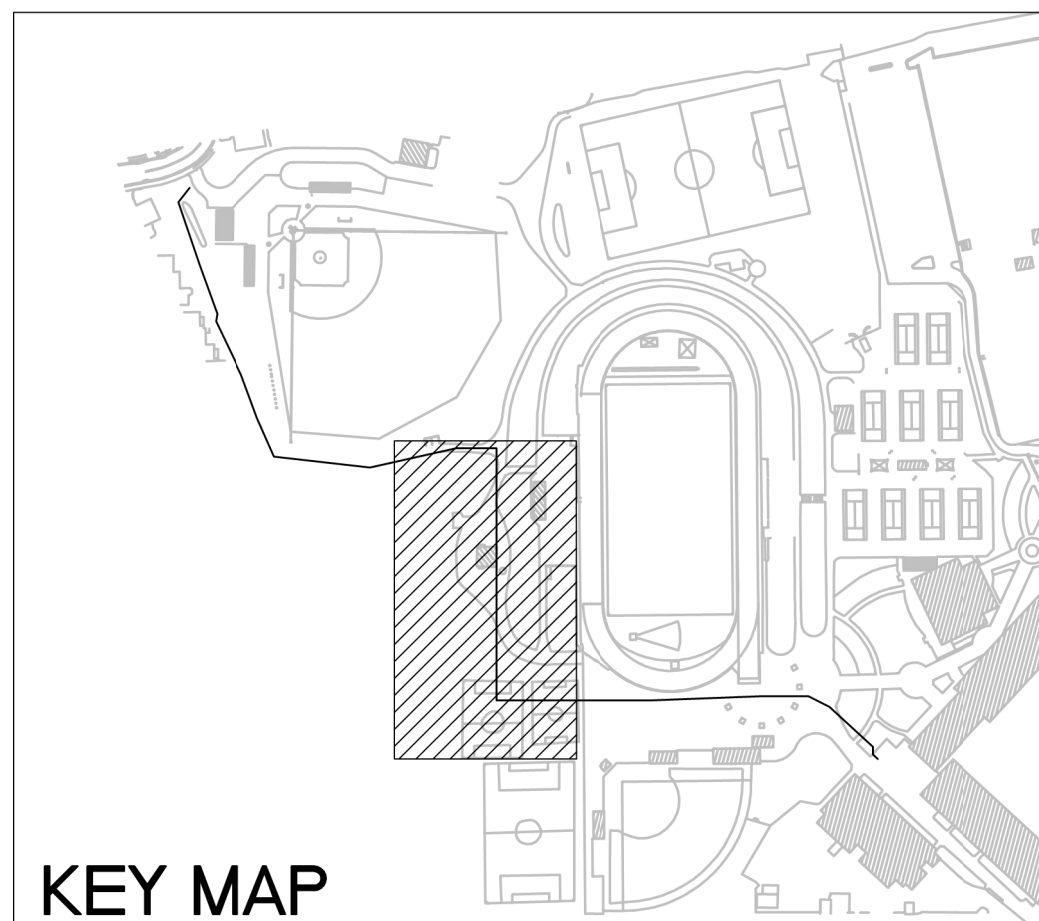


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TOPOGRAPHIC SURVEY

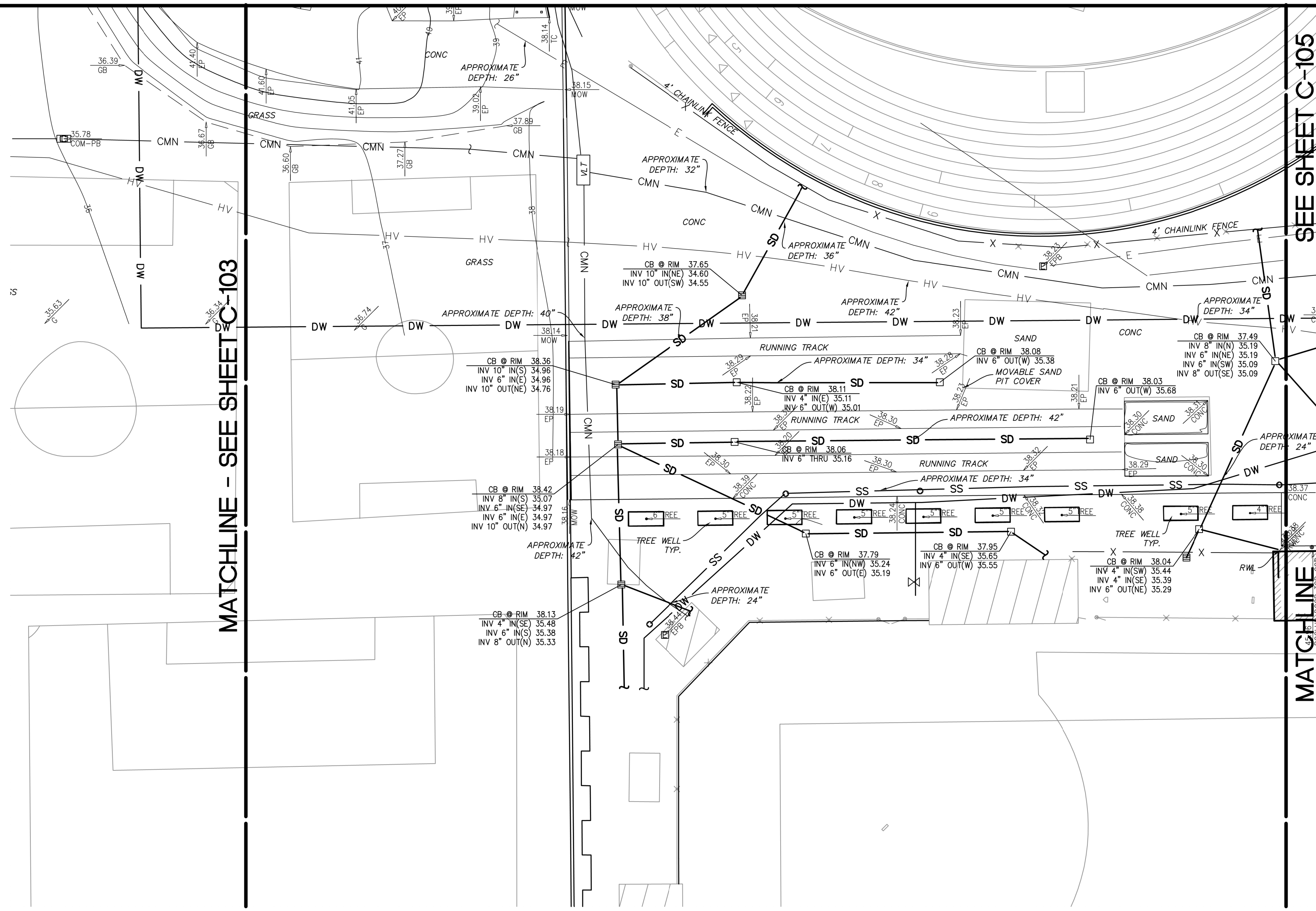
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SHEET
C-103
6 OF 15 SHEETS



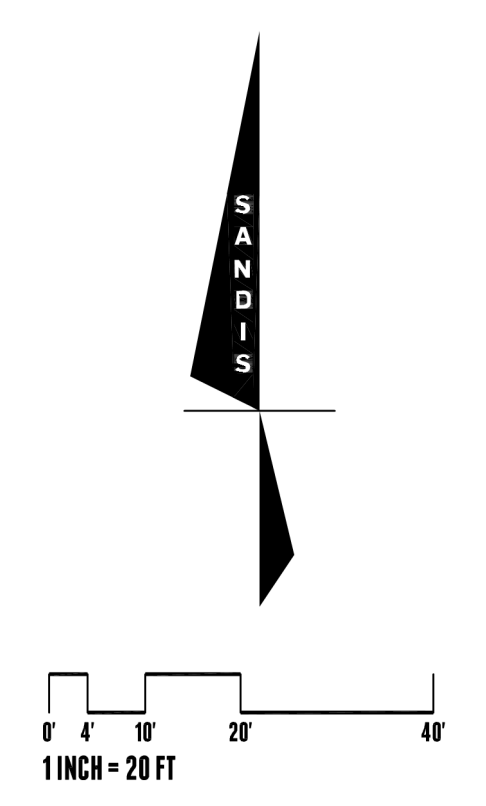
KEY MAP

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SEE SHEET C-105

MATCHLINE



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CHABOT COLLEGE
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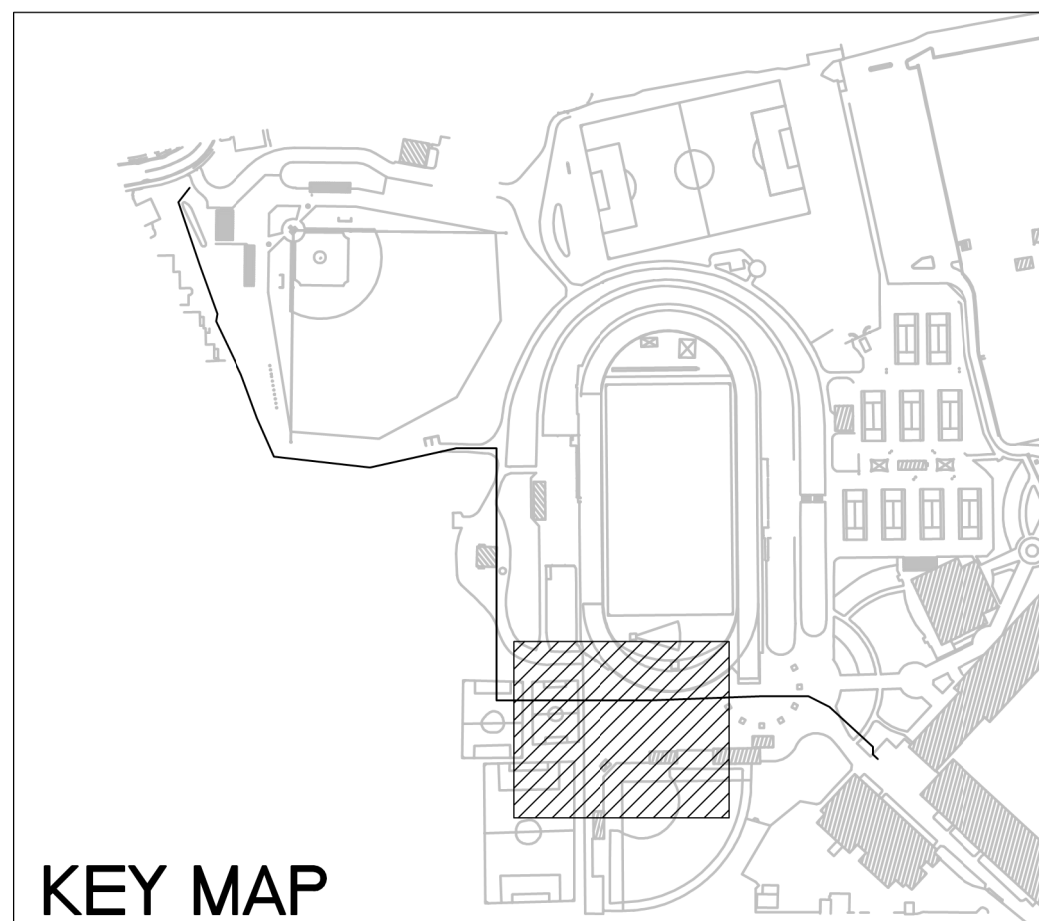
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TOPOGRAPHIC SURVEY

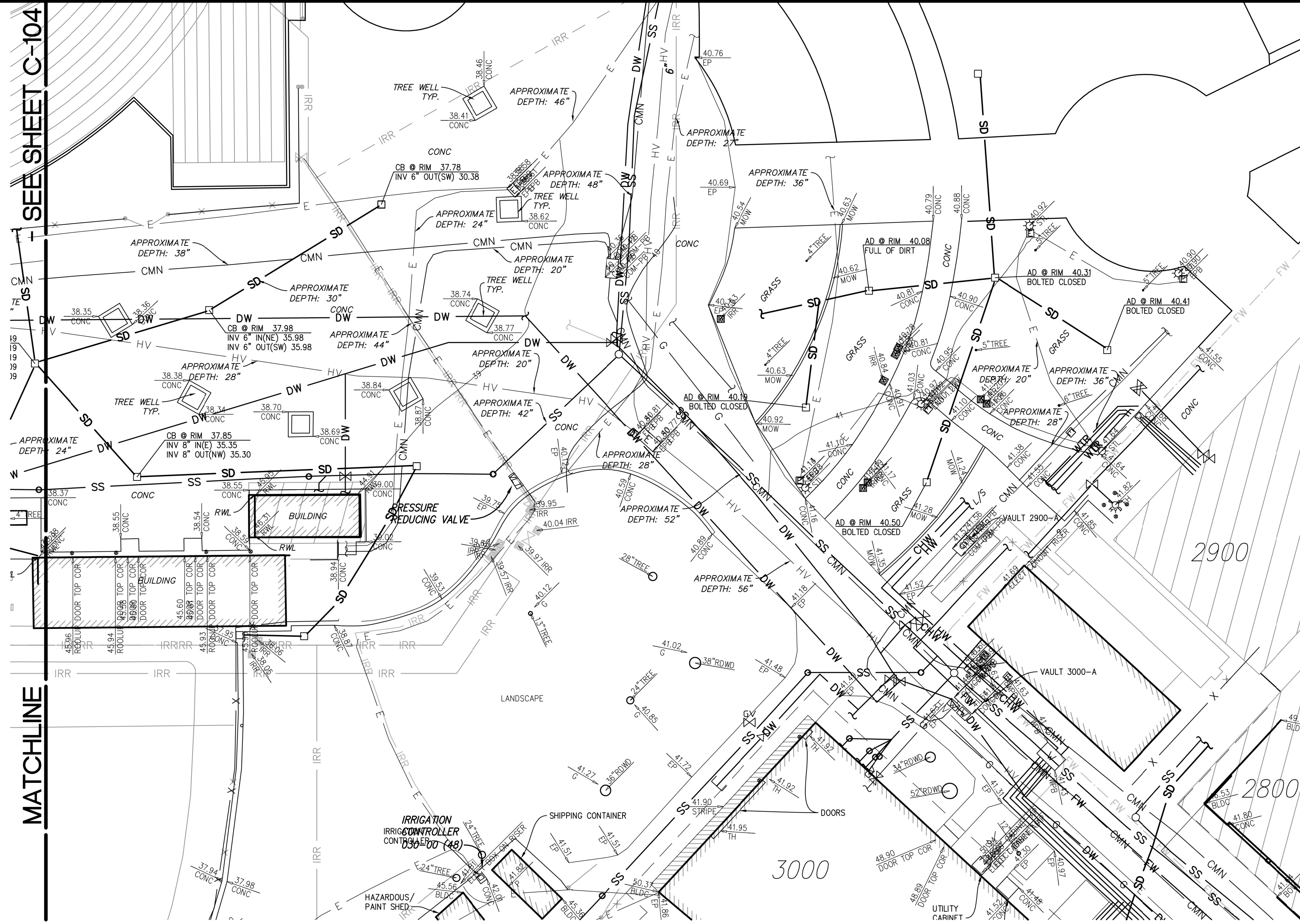
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SHEET

C-104
7 OF 15 SHEETS

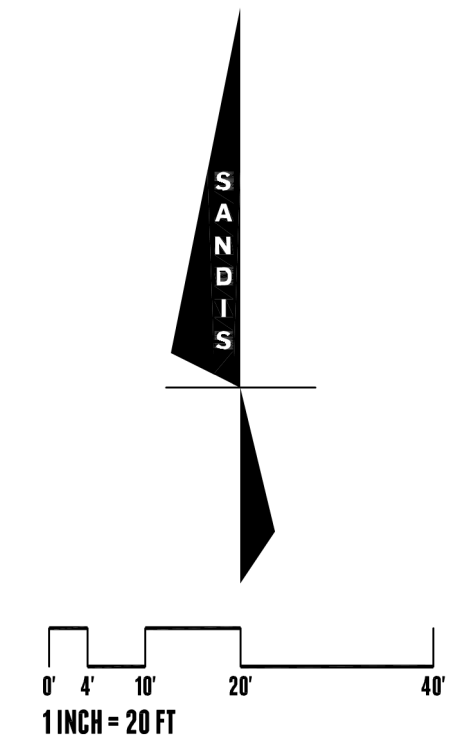


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SEE SHEET C-104

MATCHLINE



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CHABOT COLLEGE
FIRE WATER
UPGRADE PROJECT
CALIFORNIA
HAYWARD

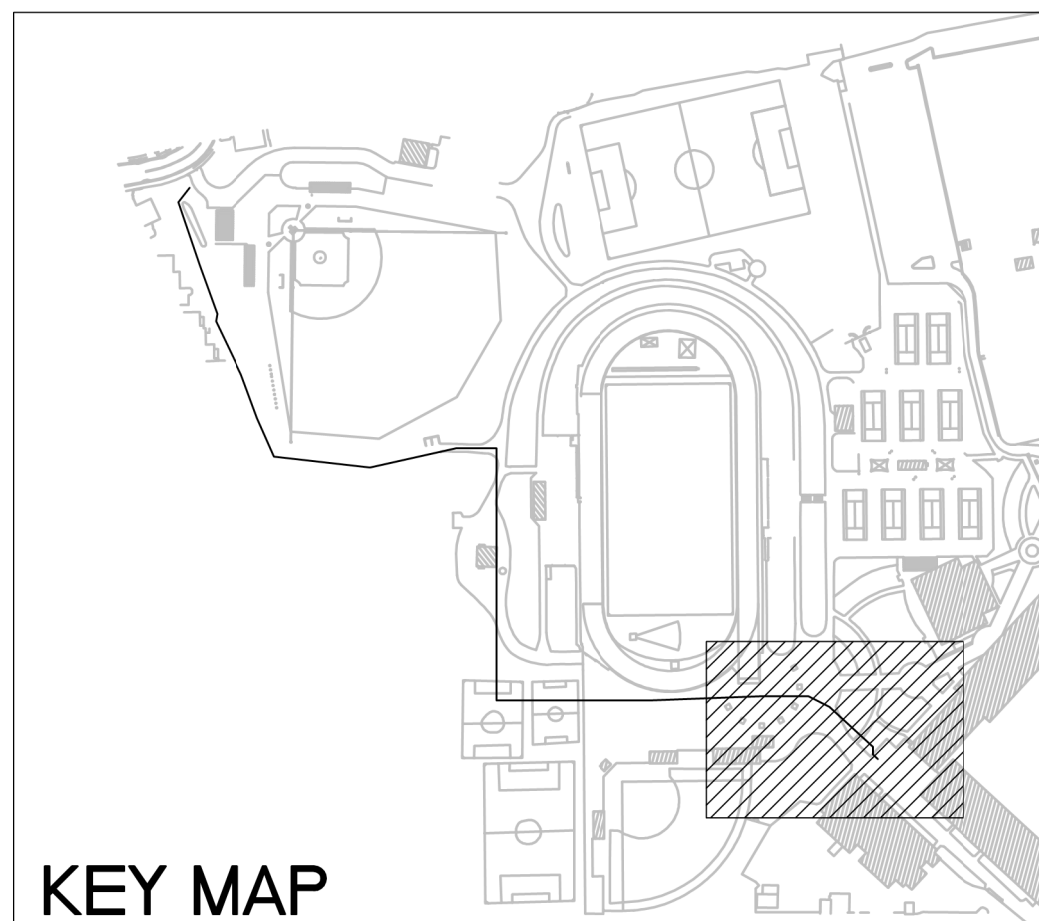


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TOPOGRAPHIC SURVEY

DATE: 03/24/2022
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C-105
8 OF 15 SHEETS



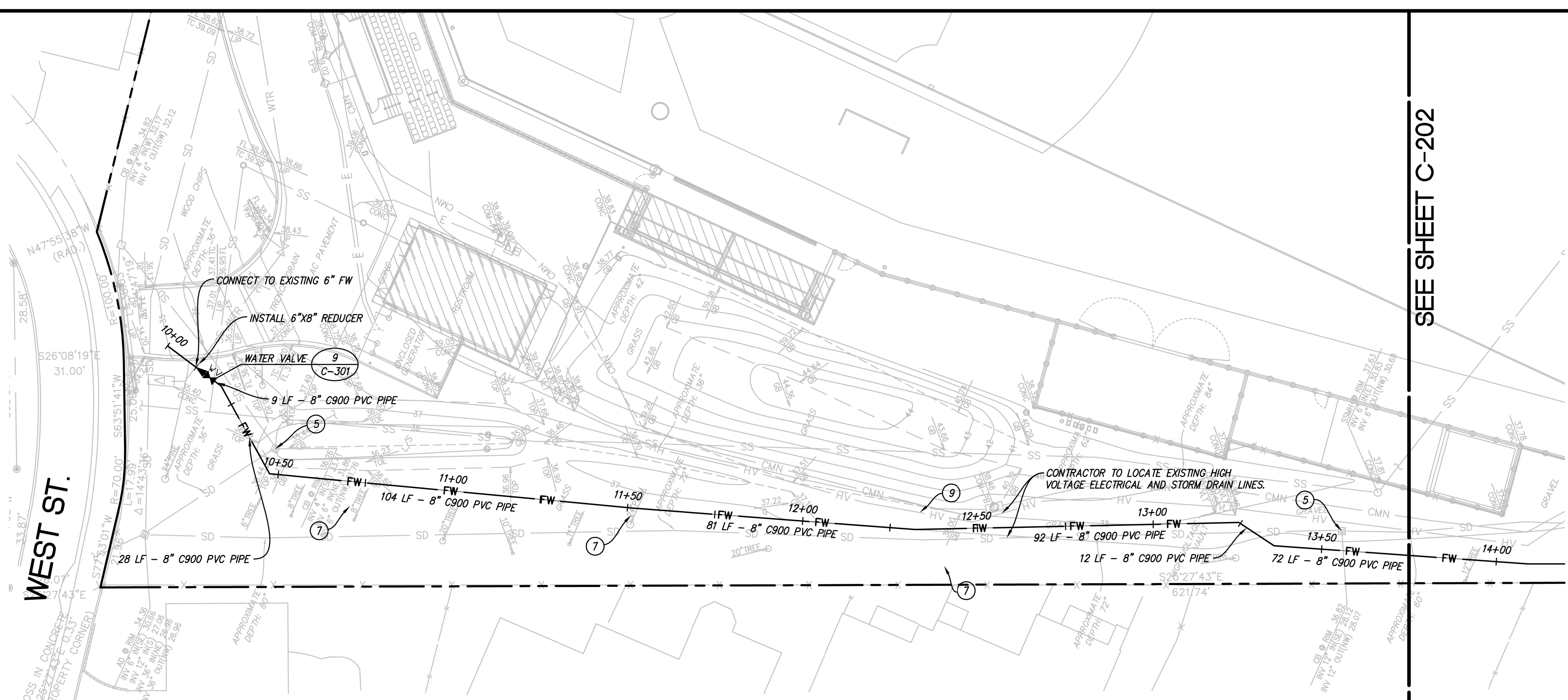
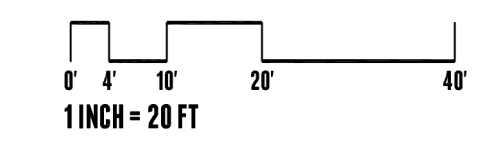
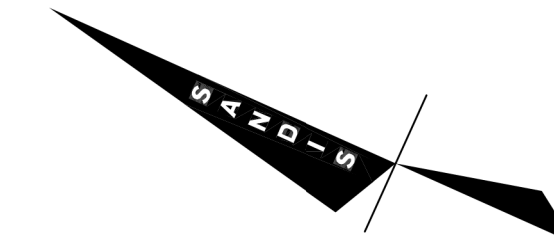
KEY MAP

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MICHAEL A. KUYKENDALL
R.C.E. NO. 70870, EXPIRES 6-30-23



SEE SHEET C-202

MATCHLINE

LEGEND

- PROPERTY LINE
- SAWCUT LINE
- PROPOSED FIRE WATER MAIN (8" C900 PVC PIPE)
- AC PAVEMENT

TREE NOTES

1. CONTRACTOR SHALL PRESERVE AND PROTECT EXISTING TREES TO THE MAXIMUM EXTENT POSSIBLE.
2. WHERE DIRECTIONAL BORING IS NOT POSSIBLE DUE TO EITHER DENSITY OF CROSSING UTILITIES OR RAPID CHANGES IN ALIGNMENT DIRECTION, TRENCHING FOR UTILITIES IS REQUIRED. WHERE TRENCHING FOR UTILITIES IS REQUIRED WITHIN DRIP LINES, TUNNELING UNDER AND AROUND ROOTS SHALL BE DONE BY HAND DIGGING TO MINIMIZE DAMAGE TO TREE ROOT SYSTEM.

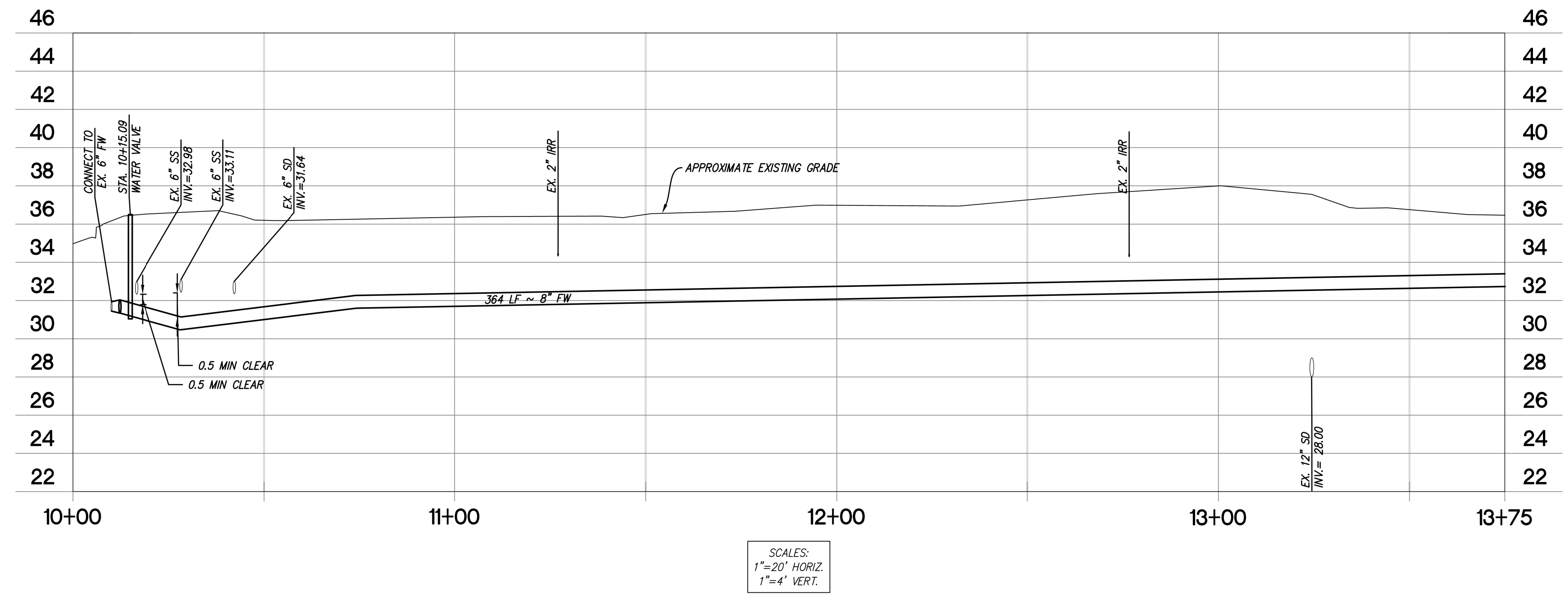
GENERAL NOTES

1. ALL BELL AND SPIGOT JOINTS AND FITTINGS INCLUDING, TEES, PLUGS, CAPS, BENDS, REDUCERS, VALVES, AND HYDRANT BRANCHES, SHALL BE MECHANICALLY RESTRAINED PER DETAIL 3, SHEET C-302.

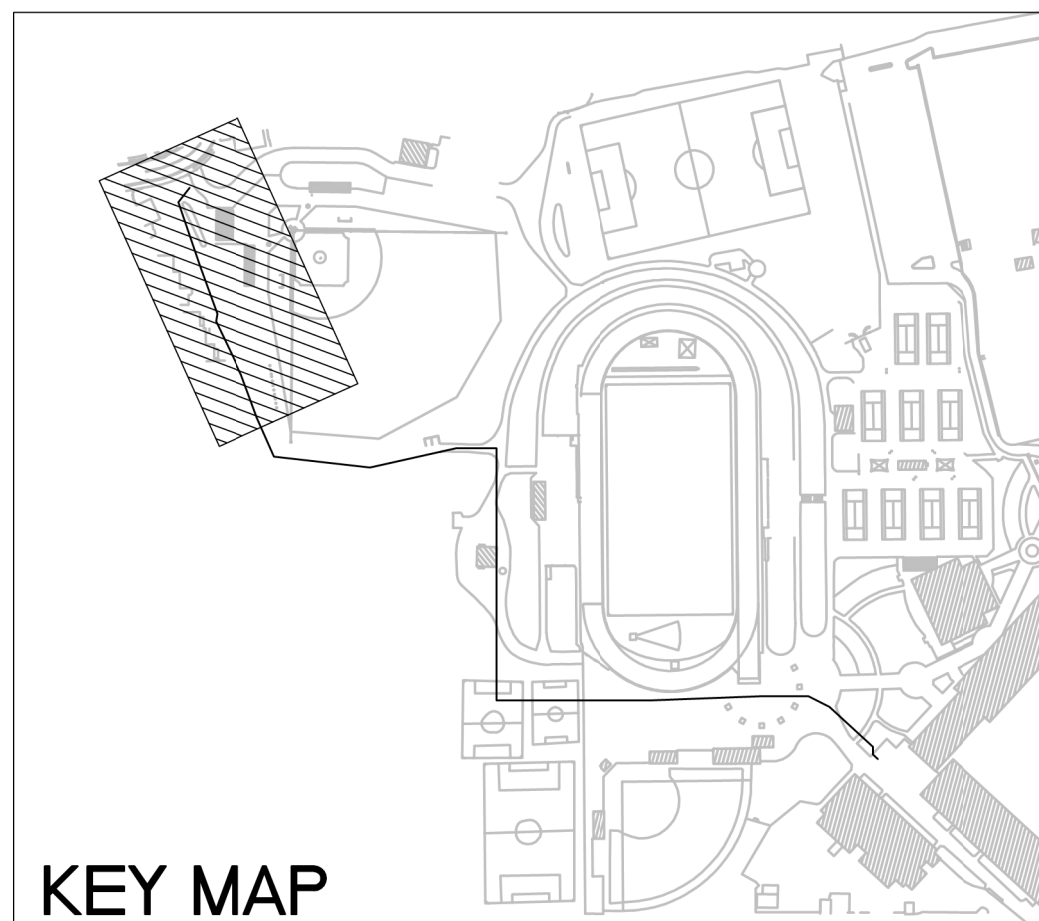
UTILITY SHEET NOTES

- ① PROTECT EXISTING ELECTRICAL OR LIGHTPOLE TO REMAIN.
- ② PROTECT EXISTING COMMUNICATION SERVICE TO REMAIN.
- ③ PROTECT EXISTING DOMESTIC WATER SERVICE TO REMAIN.
- ④ PROTECT EXISTING TELECOM SERVICE TO REMAIN.
- ⑤ PROTECT EXISTING STORM DRAIN LINE OR STRUCTURE TO REMAIN.
- ⑥ PROTECT EXISTING IRRIGATION WATER LINE TO REMAIN.
- ⑦ CONTRACTOR TO MAINTAIN 24 INCH CLEARANCE AND RELOCATE IRRIGATION AS NECESSARY.
- ⑧ CONTRACTOR TO LOCATE AND MAINTAIN 24" CLEARANCE FROM EXISTING UTILITY.
- ⑨ CONTRACTOR TO LOCATE EXISTING HIGH VOLTAGE AND MAINTAIN 24" SEPARATION.
- ⑩ CONTRACTOR TO DEMOLISH AND REMOVE EXISTING TREE INCLUDING STUMP. STUMP SHALL BE GROUND TO A MINIMUM DEPTH OF 18 INCHES BELOW GRADE OR REMOVED IN ITS ENTIRETY BY CUTTING ALL PERIMETER ROOTS AND PULLING STUMP FROM GROUND.
- ⑪ EXISTING STRUCTURE RIMS TO BE ADJUSTED TO GRADE.

CHABOT COLLEGE
FIRE WATER
UPGRADE PROJECT
 CALIFORNIA
 HAYWARD



SCALES:
1"=20' HORIZ.
1"=4' VERT.



No.	REVISION	DATE	BY

UTILITY PLAN AND PROFILE

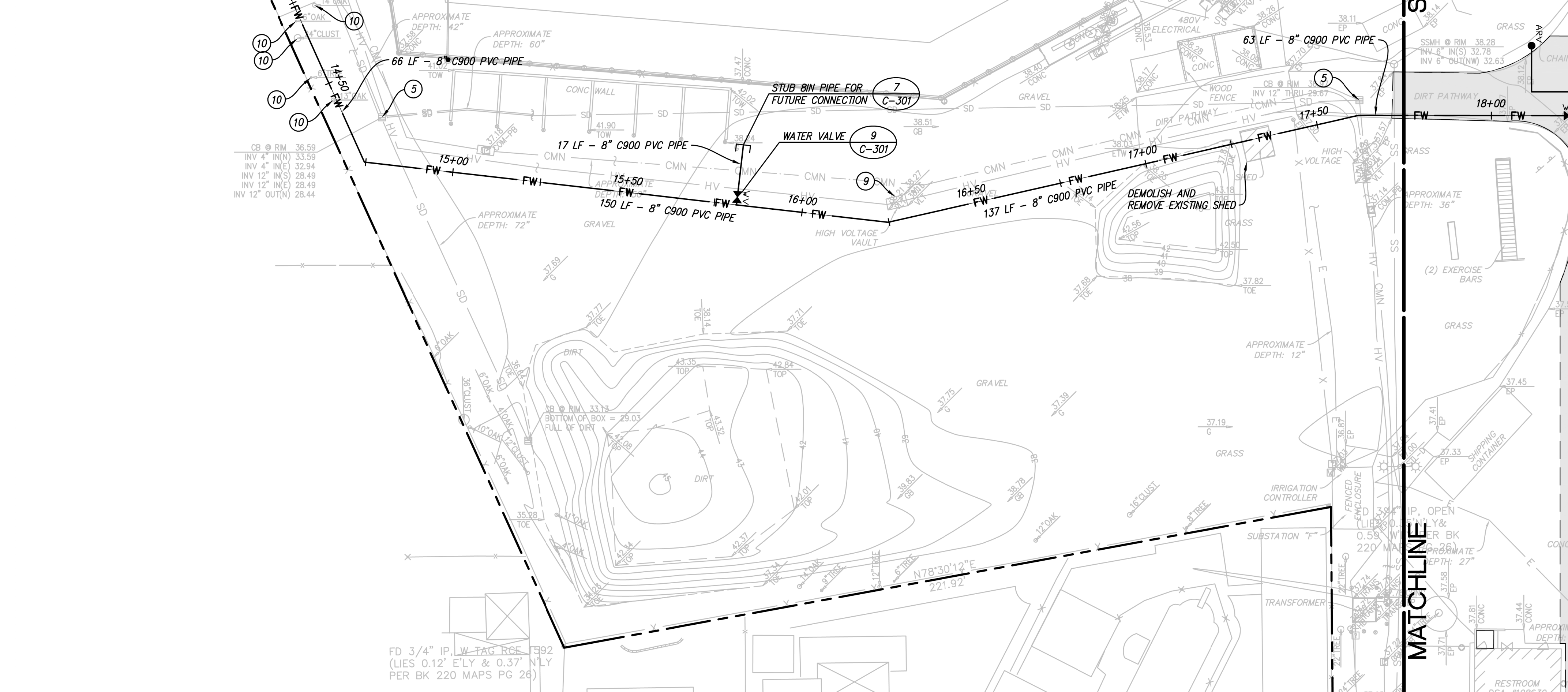
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APPROVED BY: MK
DRAWING NO.: 618201.D

SHEET
C-201
9 OF 15 SHEETS

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MATCHLINE - SEE SHEET C-201

SEE SHEET C-203



LEGEND

- PROPERTY LINE
- - - SAWCUT LINE
- FW PROPOSED FIRE WATER MAIN (8" C900 PVC PIPE)
- AC PAVEMENT
- (2) EXERCISE BARS
- (2) C-301

TREE NOTES

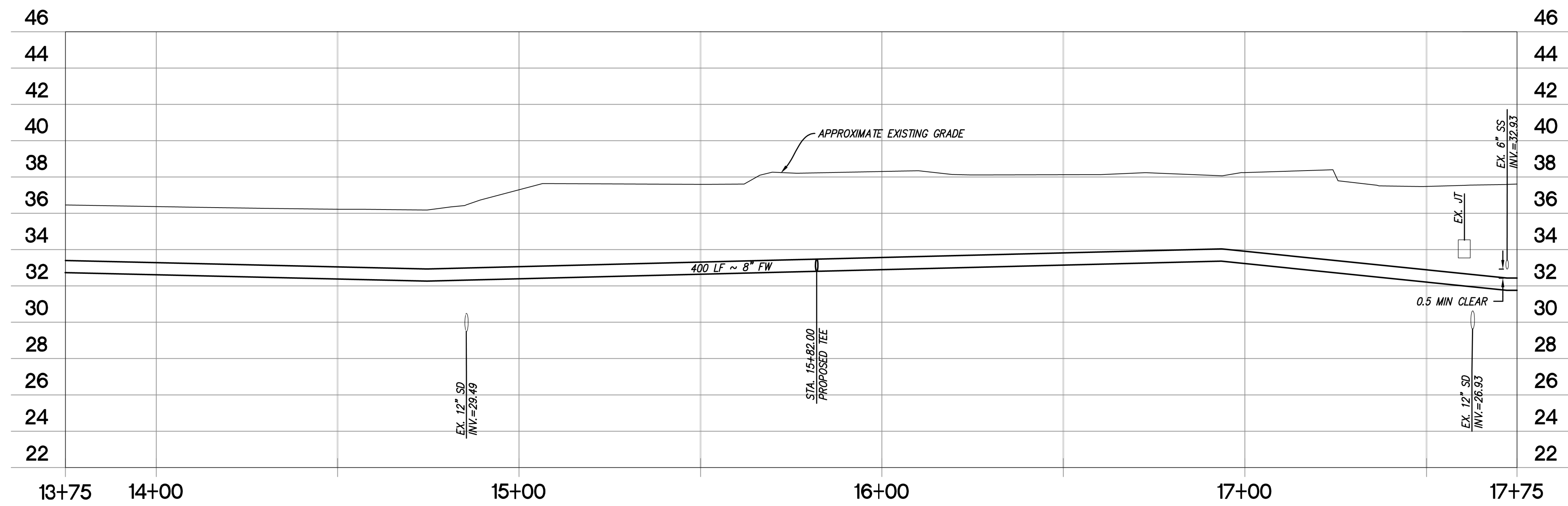
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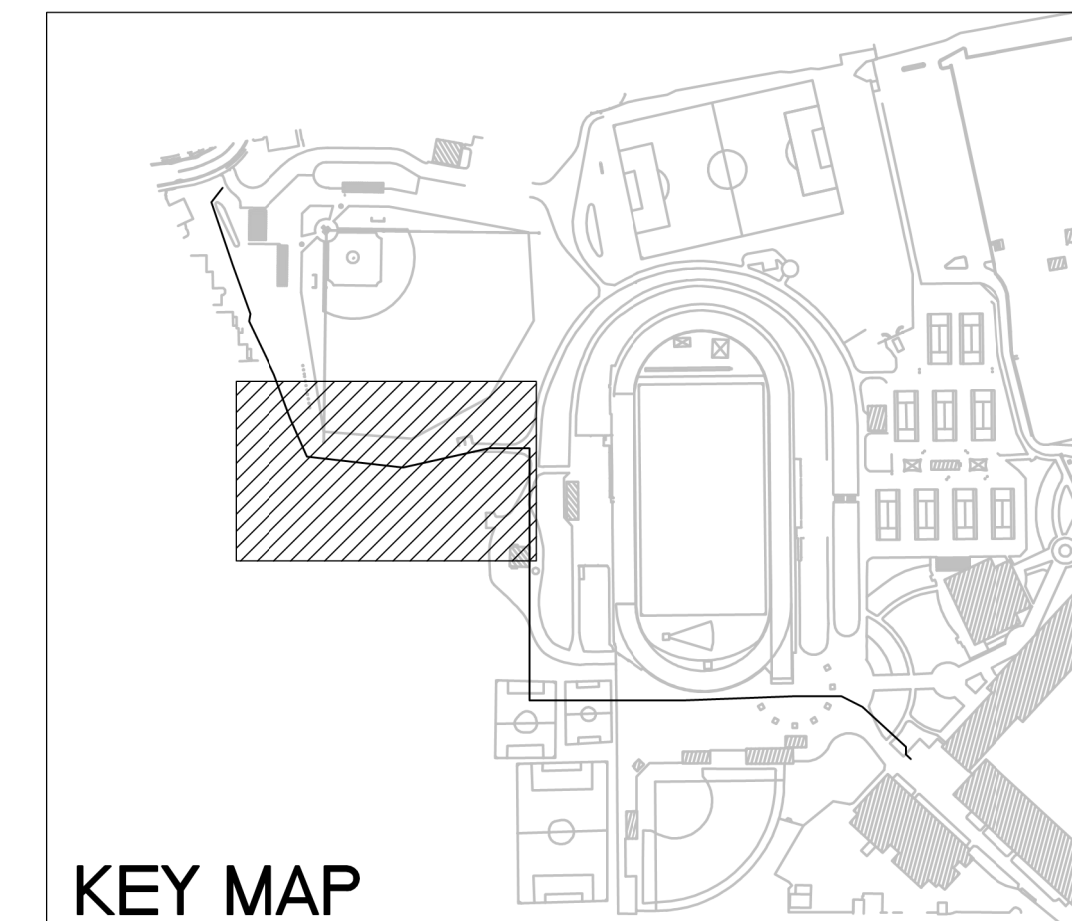
UTILITY SHEET NOTES

- 1) PROTECT EXISTING ELECTRICAL OR LIGHTPOLE TO REMAIN.
- 2) PROTECT EXISTING COMMUNICATION SERVICE TO REMAIN.
- 3) PROTECT EXISTING DOMESTIC WATER SERVICE TO REMAIN.
- 4) PROTECT EXISTING TELECOM SERVICE TO REMAIN.
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- 11) EXISTING STRUCTURE RIMS TO BE ADJUSTED TO GRADE.



SCALES:
1"=20' HORIZ.
1"=4' VERT.

KEY MAP



IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-120049 INC.
REVIEWED FOR
SS FLS ACS
DATE: 06/24/22

DATE: 6/15/2022
REGISTERED PROFESSIONAL ENGINEER
MICHAEL A. KUYKENDALL
No. 70870
Exp. 6/30/23
CIVIL
STATE OF CALIFORNIA
MICHAEL A. KUYKENDALL
R.C.E. NO. 70870, EXPIRES 6-30-23

CHABOT COLLEGE
FIRE WATER
UPGRADE PROJECT
CALIFORNIA
HAYWARD

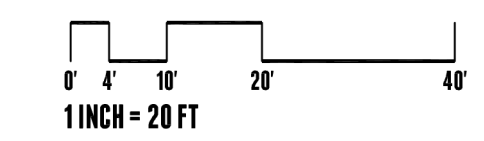
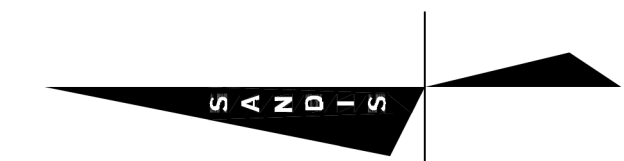


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UTILITY PLAN AND PROFILE

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DRAWN BY: JME
APPROVED BY: MK
DRAWING NO.: 618201.D

SHEET
C-202
10 OF 15 SHEETS



LEGEND

	PROPERTY LINE
	SAWCUT LINE
	PROPOSED FIRE WATER MAIN (8" C900 PVC PIPE)
	AC PAVEMENT
	2 C-301

- TREE NOTES**
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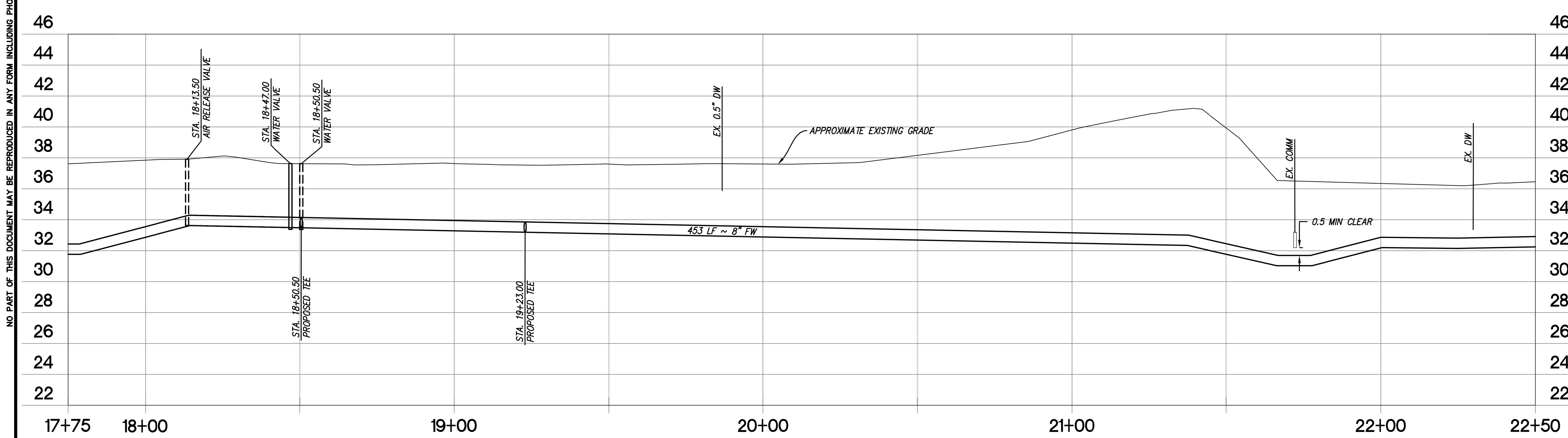
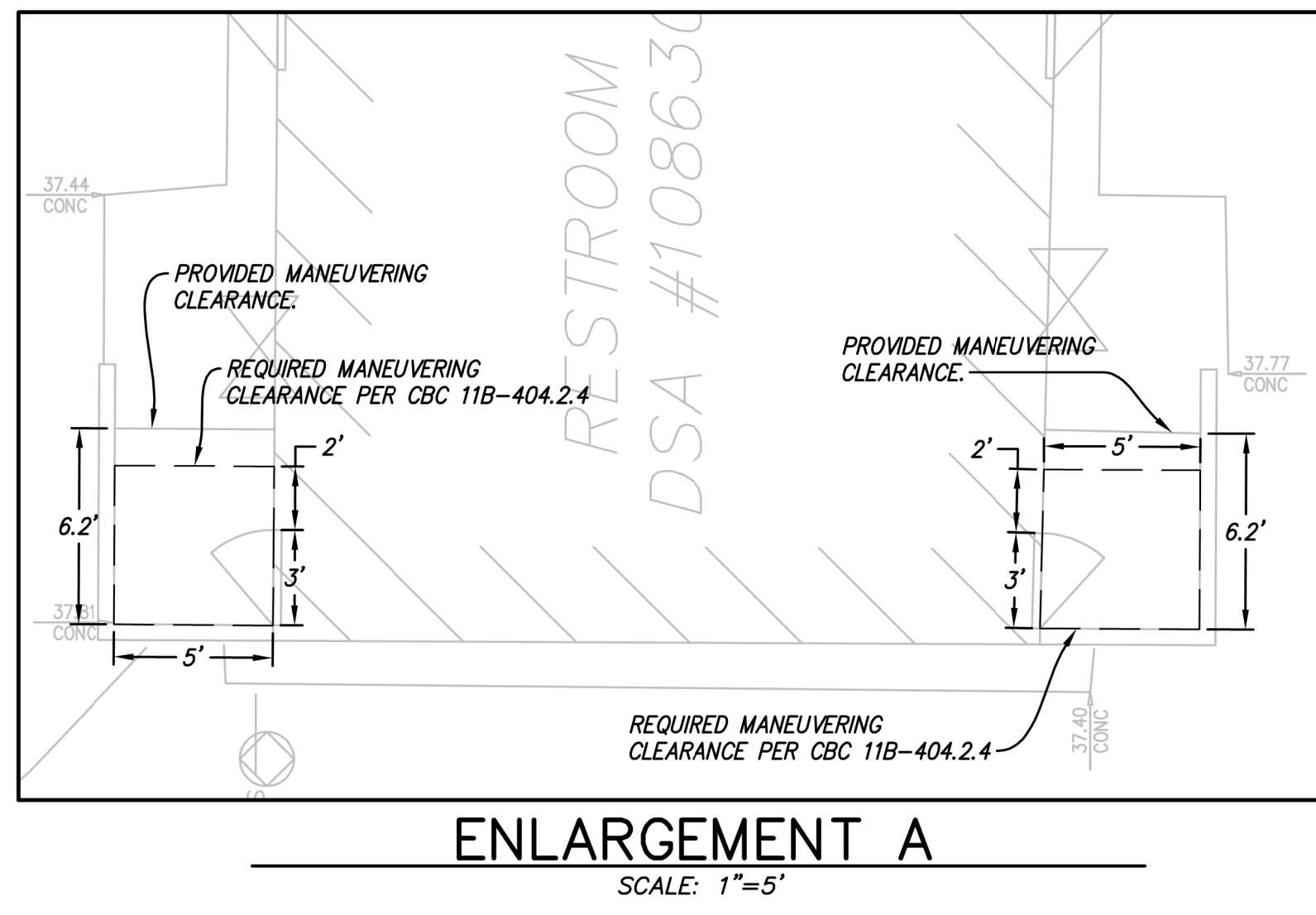
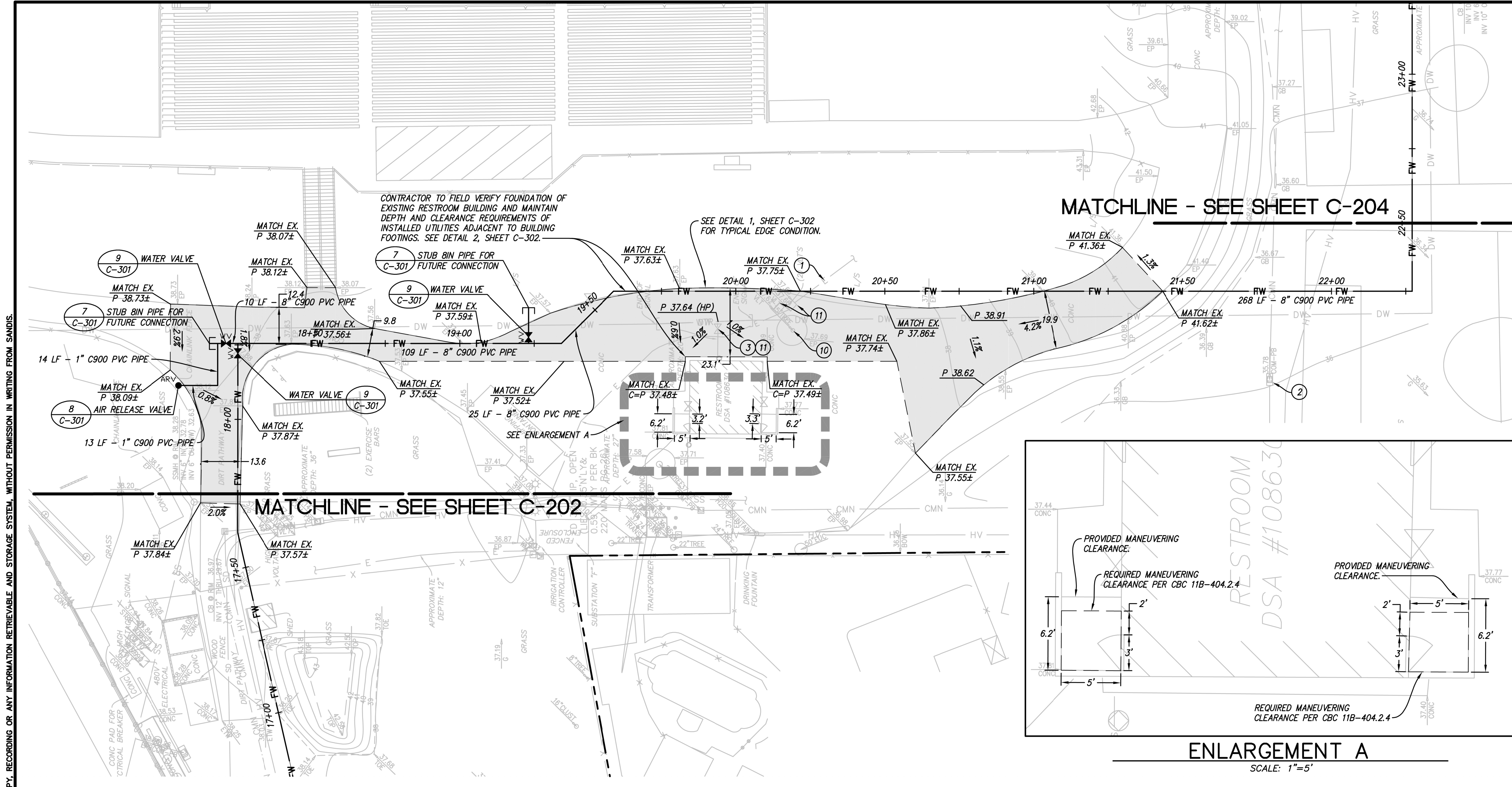
CHABOT COLLEGE
FIRE WATER
UPGRADE PROJECT
 CALIFORNIA
 HAYWARD



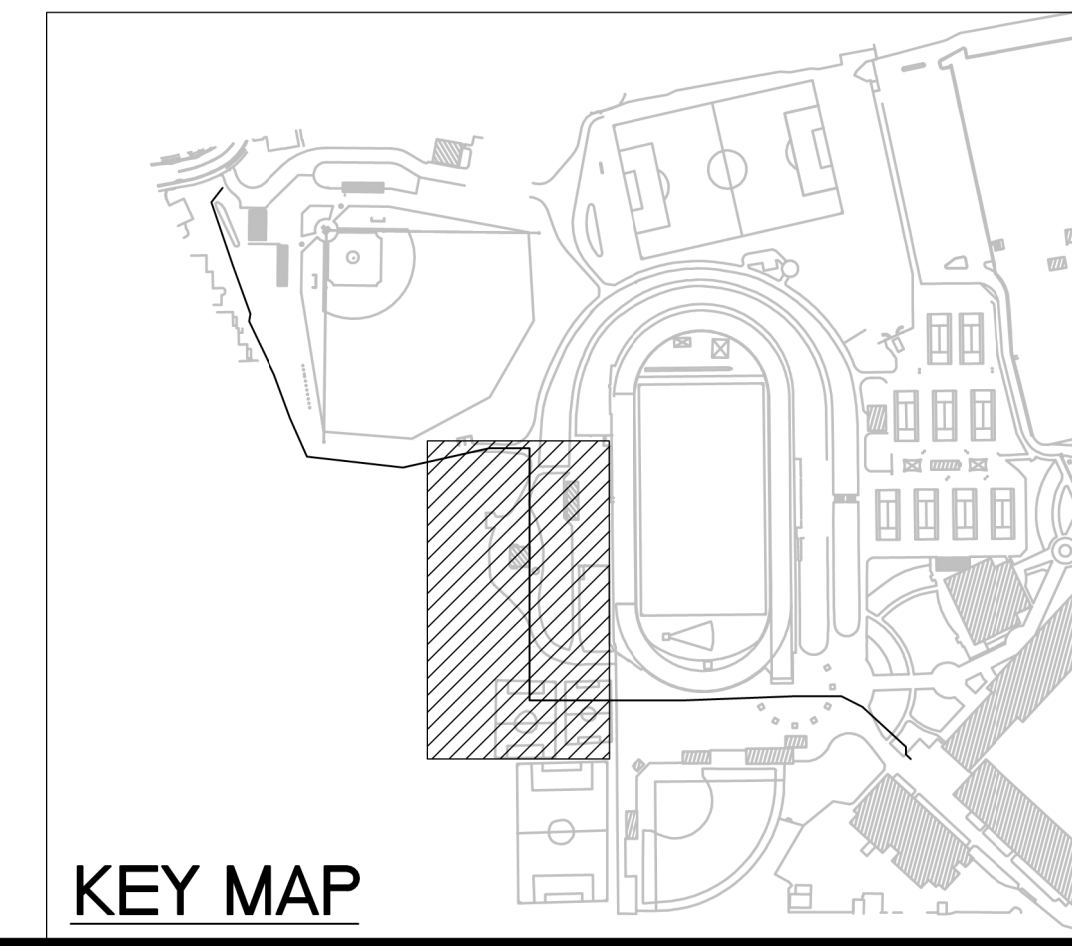
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UTILITY PLAN AND PROFILE

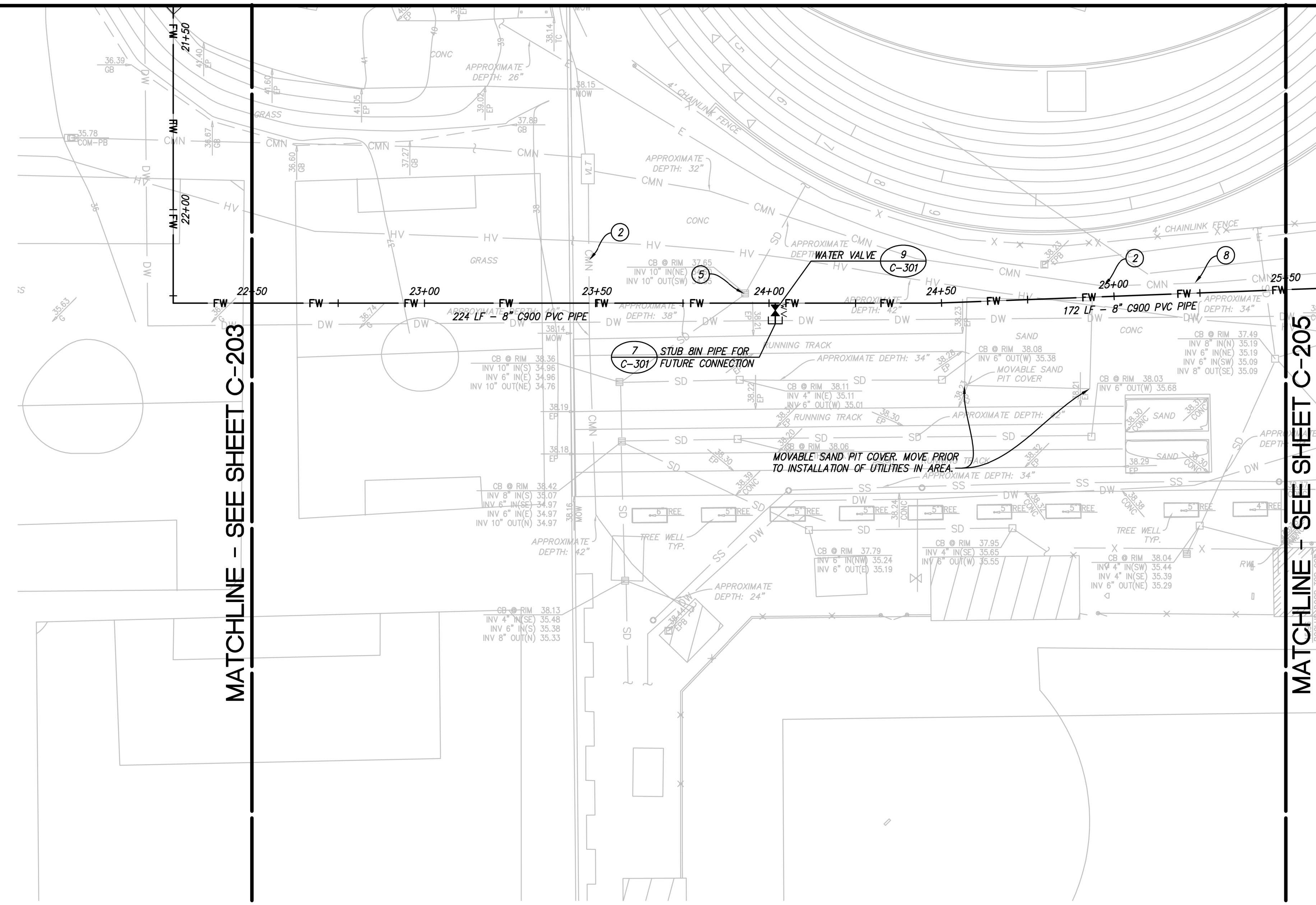
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 DRAWN BY: JME
 APPROVED BY: MK
 DRAWING NO.: 618201.D
 SHEET
C-203
 11 OF 15 SHEETS



SCALES:
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 1"=4' VERT.

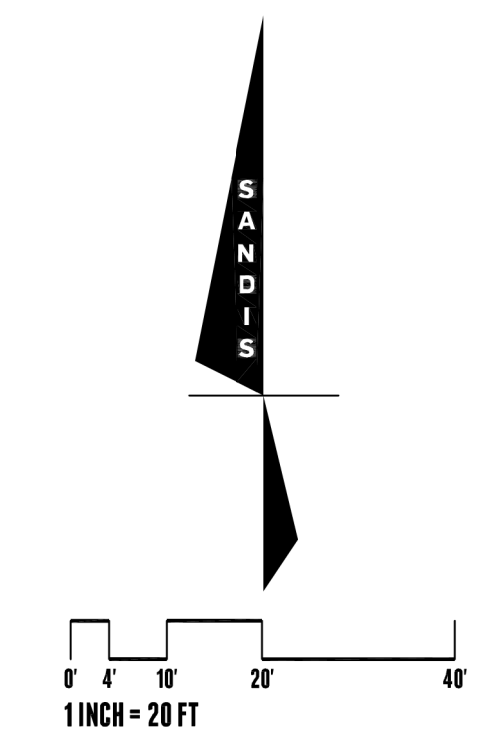


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MATCHLINE - SEE SHEET C-203

MATCHLINE - SEE SHEET C-205



LEGEND

- PROPERTY LINE
- SAWCUT LINE
- PROPOSED FIRE WATER MAIN (8" C900 PVC PIPE)
- AC PAVEMENT
-

TREE NOTES

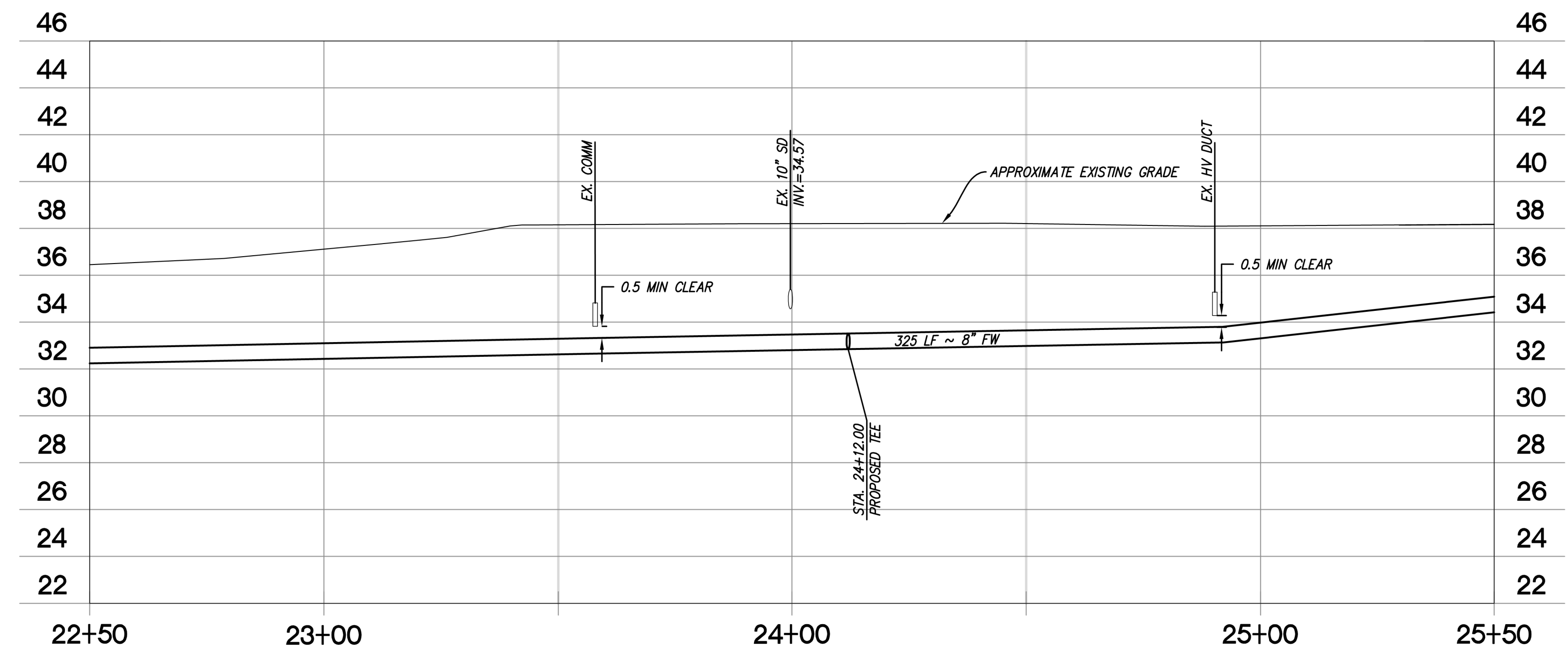
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HAYWARD

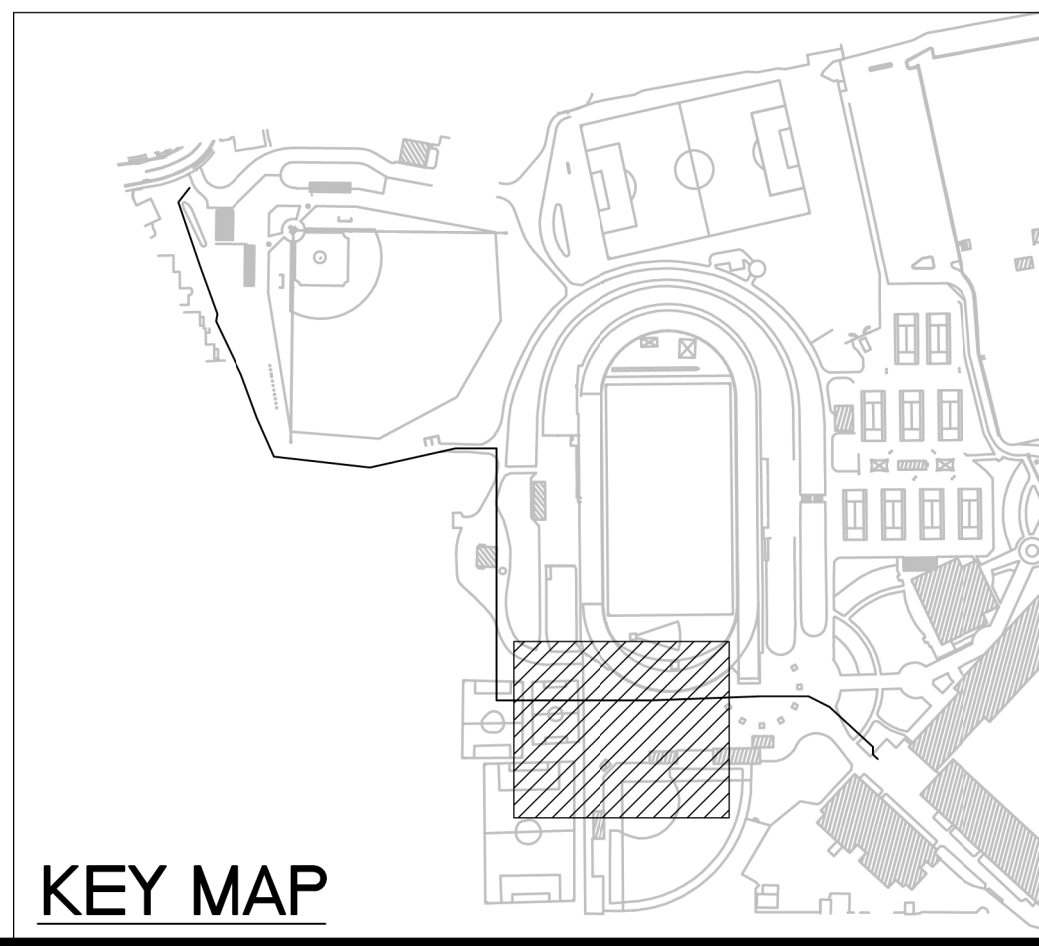


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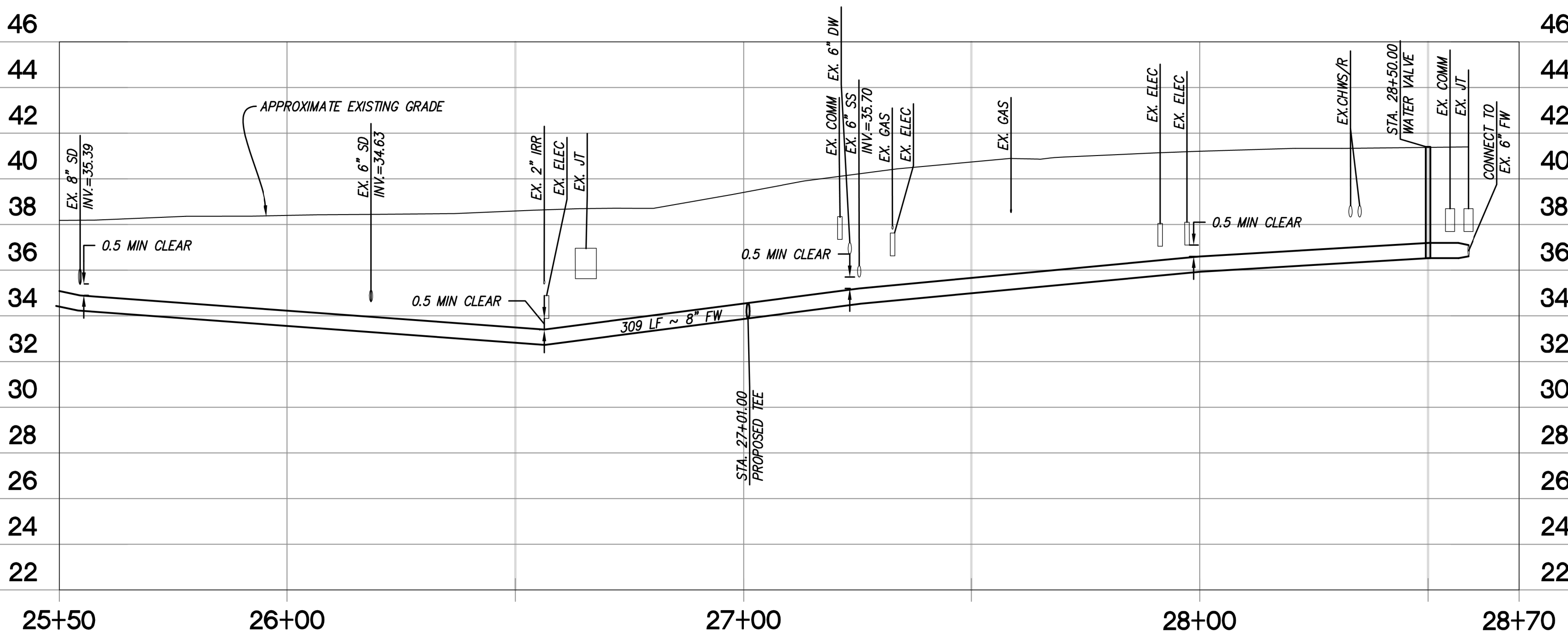
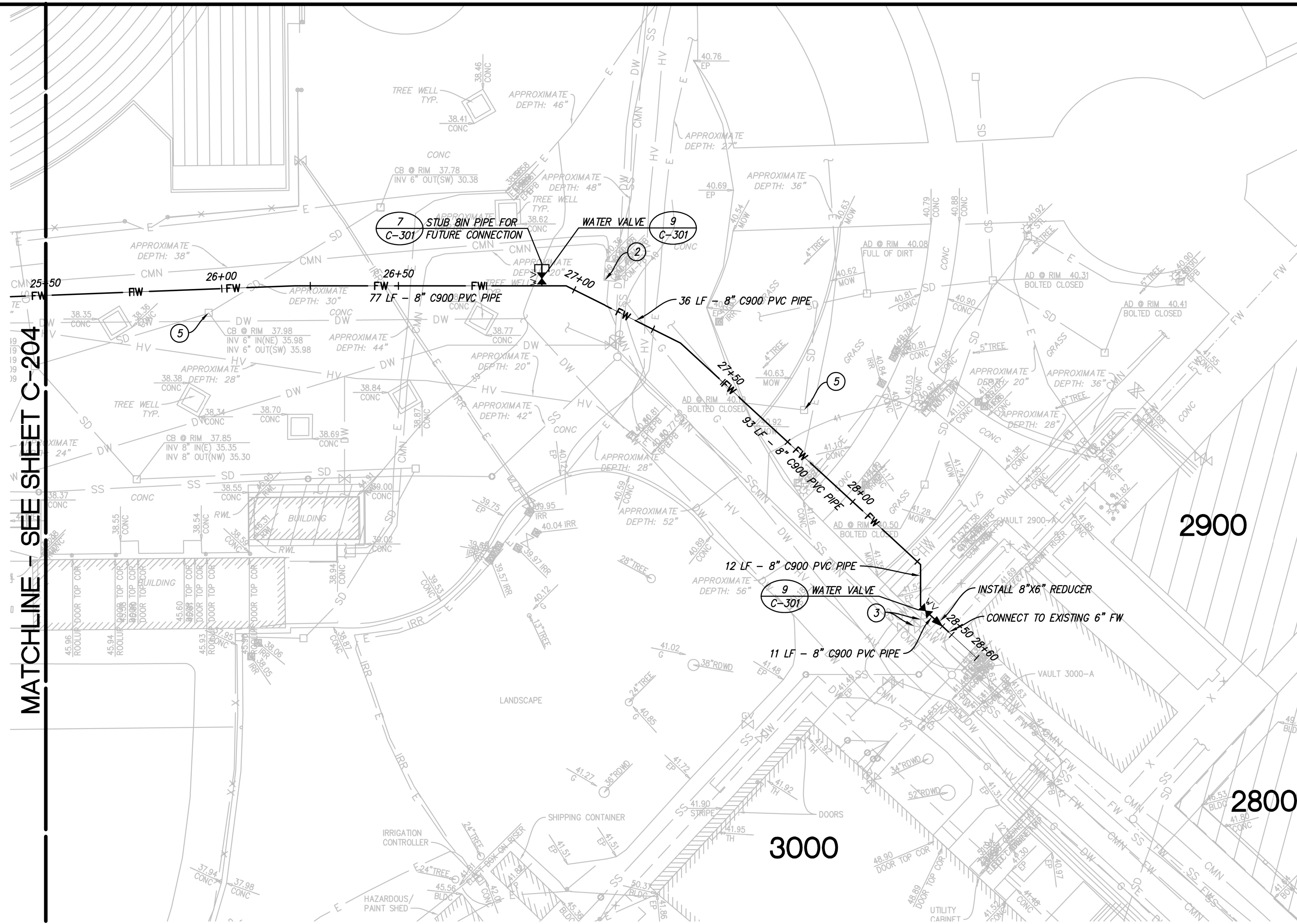
UTILITY PLAN AND PROFILE

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DRAWN BY: JME
APPROVED BY: MK
DRAWING NO.: 618201.D

SHEET
C-204
12 OF 15 SHEETS



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SCALES:
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- SAWCUT LINE
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- AC PAVEMENT

TREE NOTES

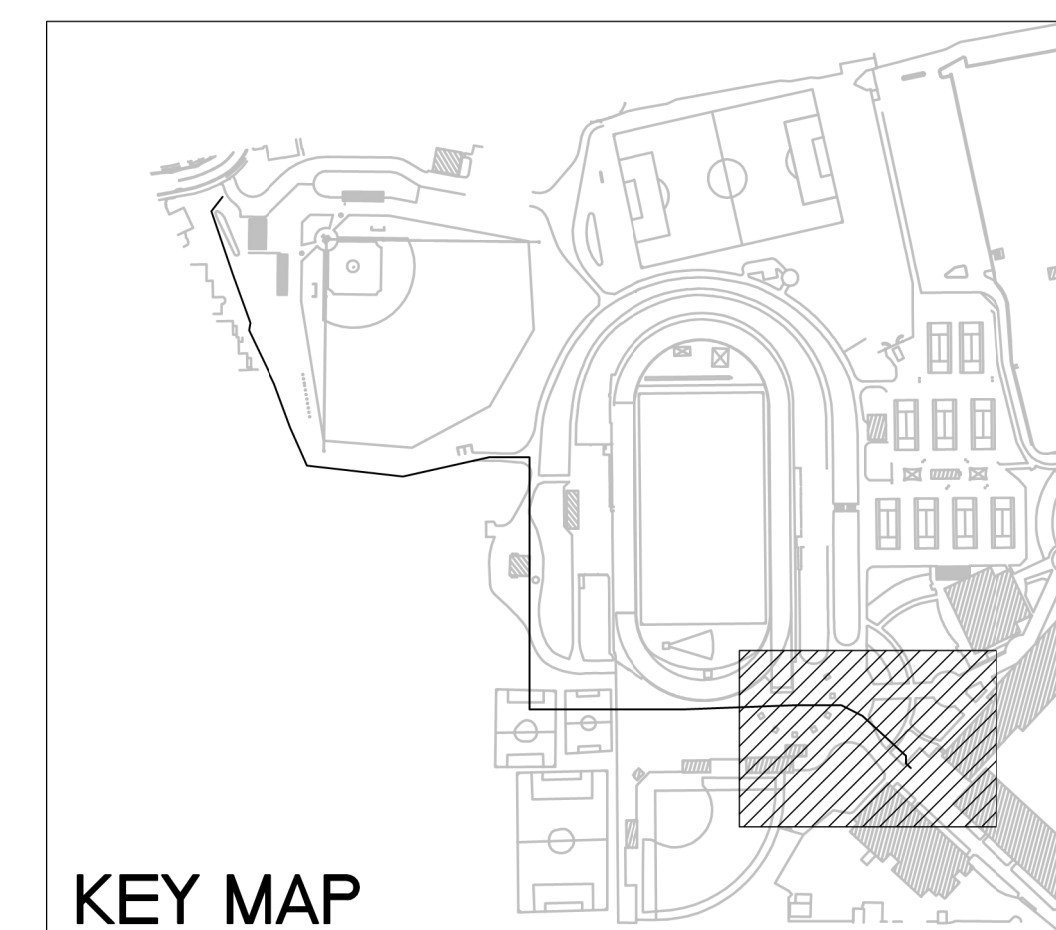
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CHABOT COLLEGE
FIRE WATER
UPGRADE PROJECT
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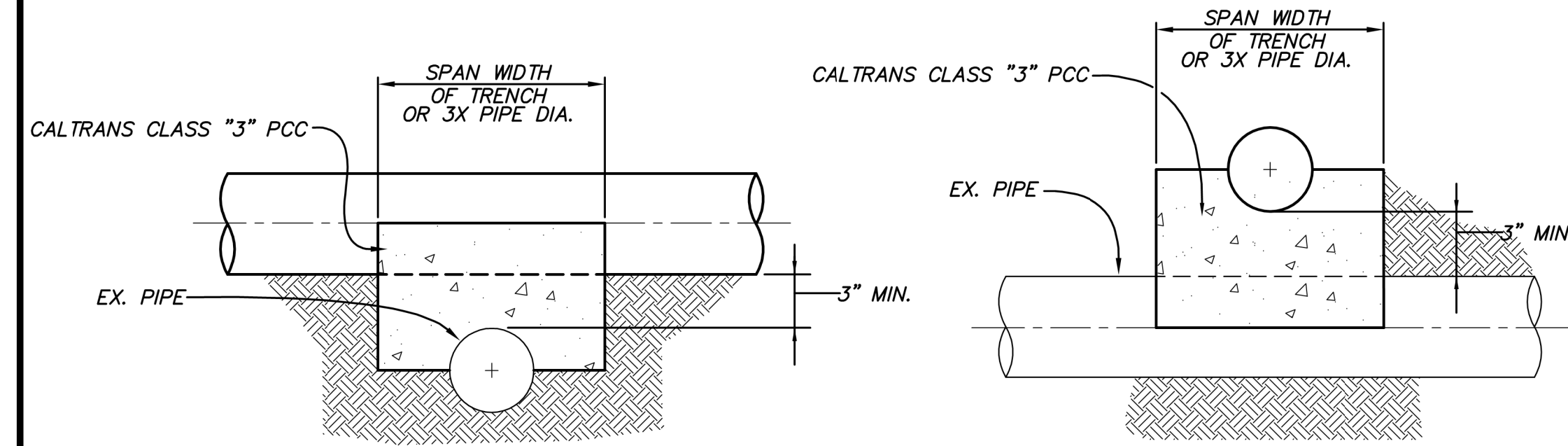
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UTILITY PLAN AND PROFILE

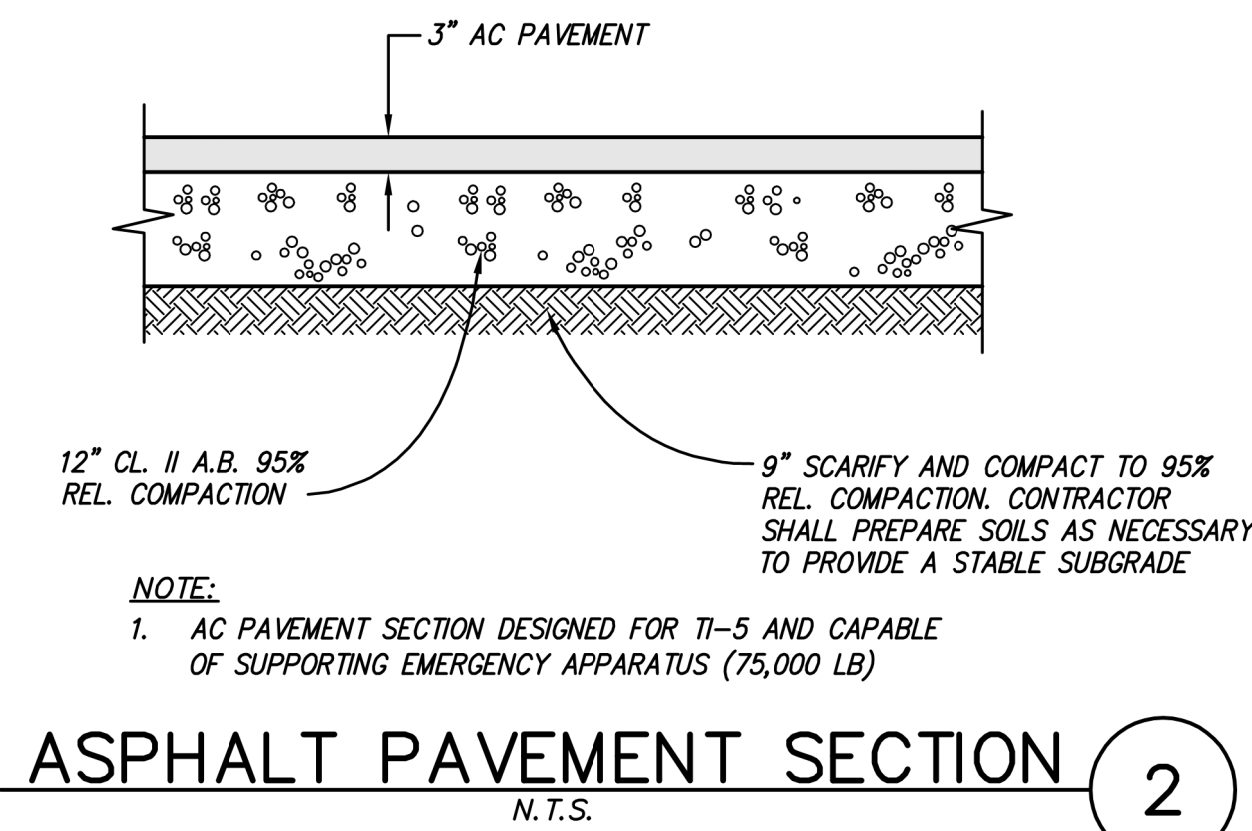
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SHEET
C-205
13 OF 15 SHEETS

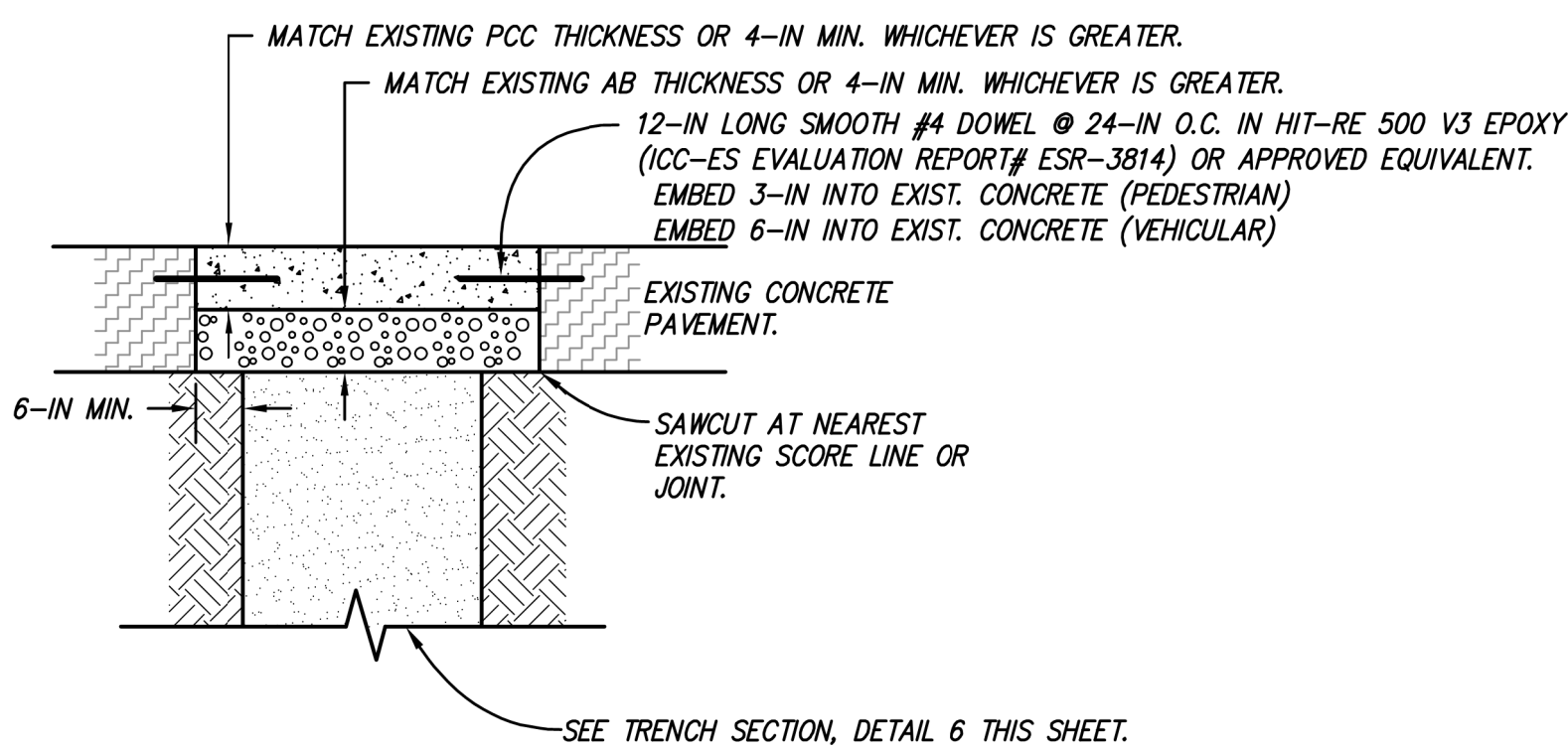
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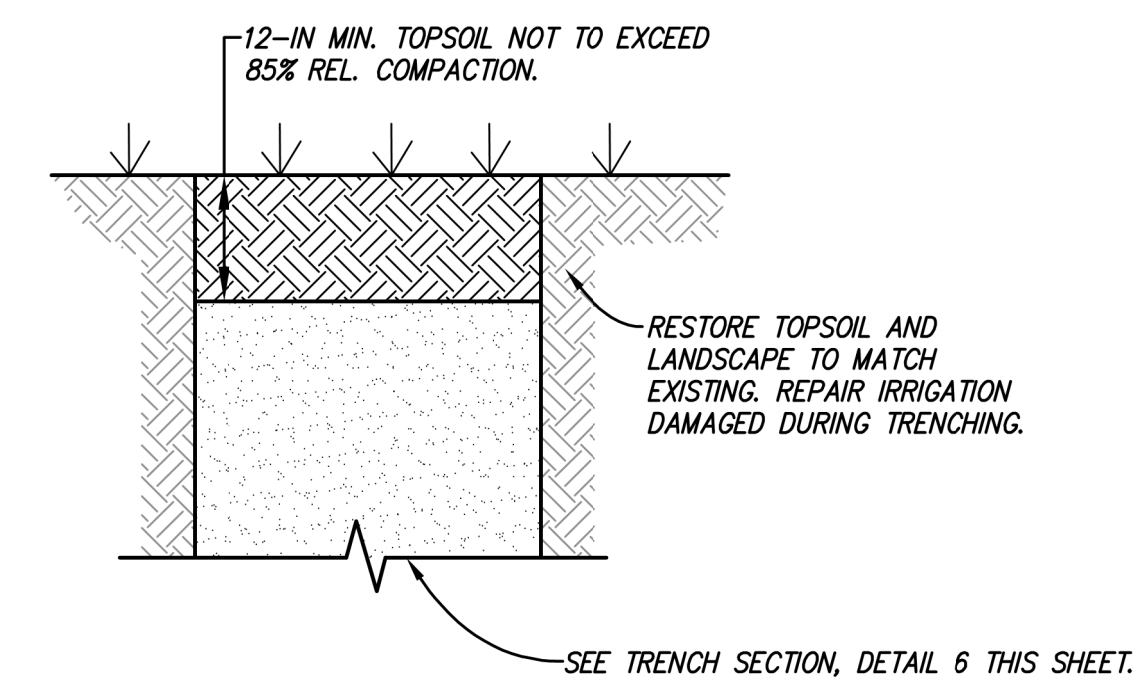
PIPE SADDLE DETAIL
N.T.S. 1



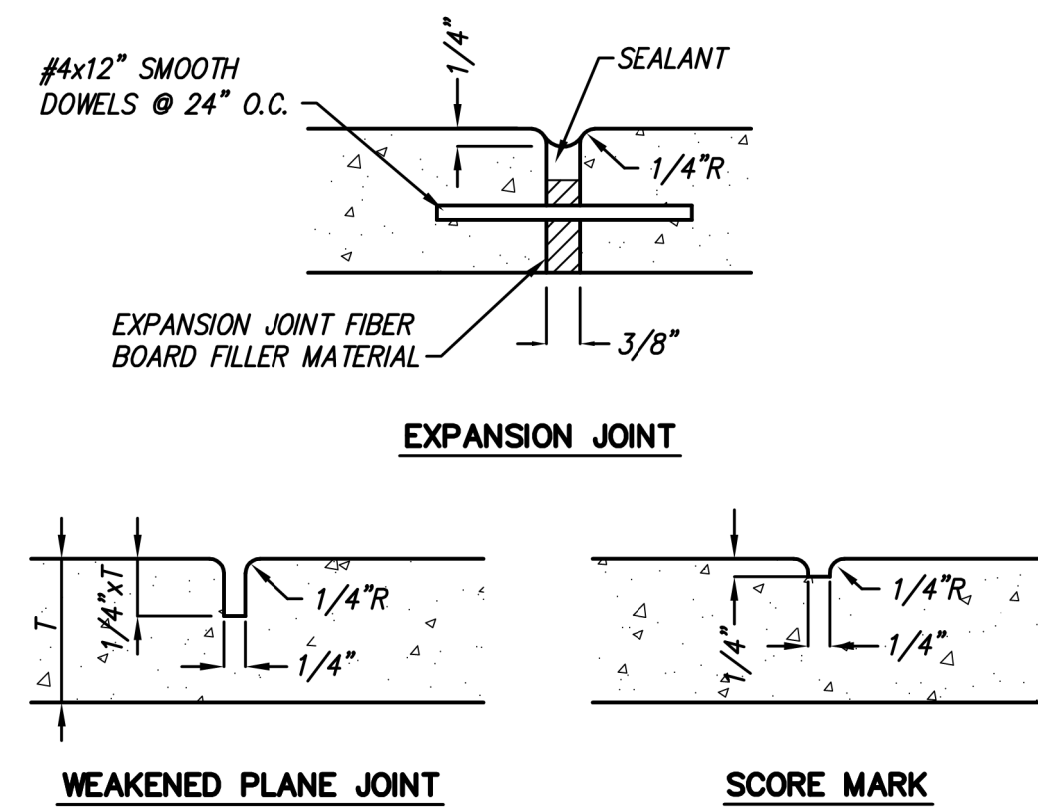
ASPHALT PAVEMENT SECTION
N.T.S. 2



CONCRETE PAVEMENT TRENCH REPAIR
N.T.S. 3

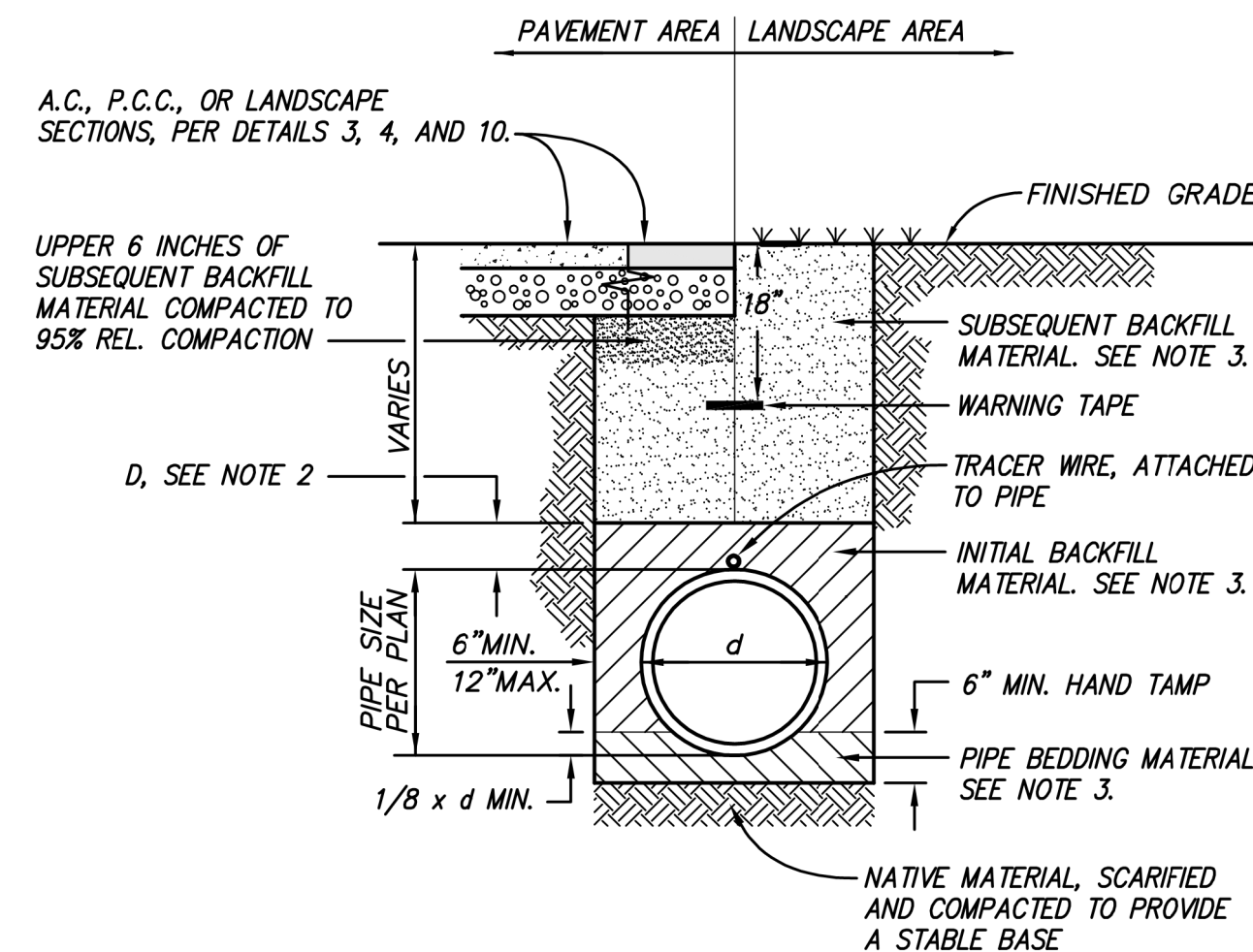


LANDSCAPE TRENCH REPAIR
N.T.S. 4



NOTE: ALTERNATE BETWEEN EXPANSION AND WEAKENED PLANE JOINTS AT 5' O.C., TYPICAL ALONG SIDEWALKS

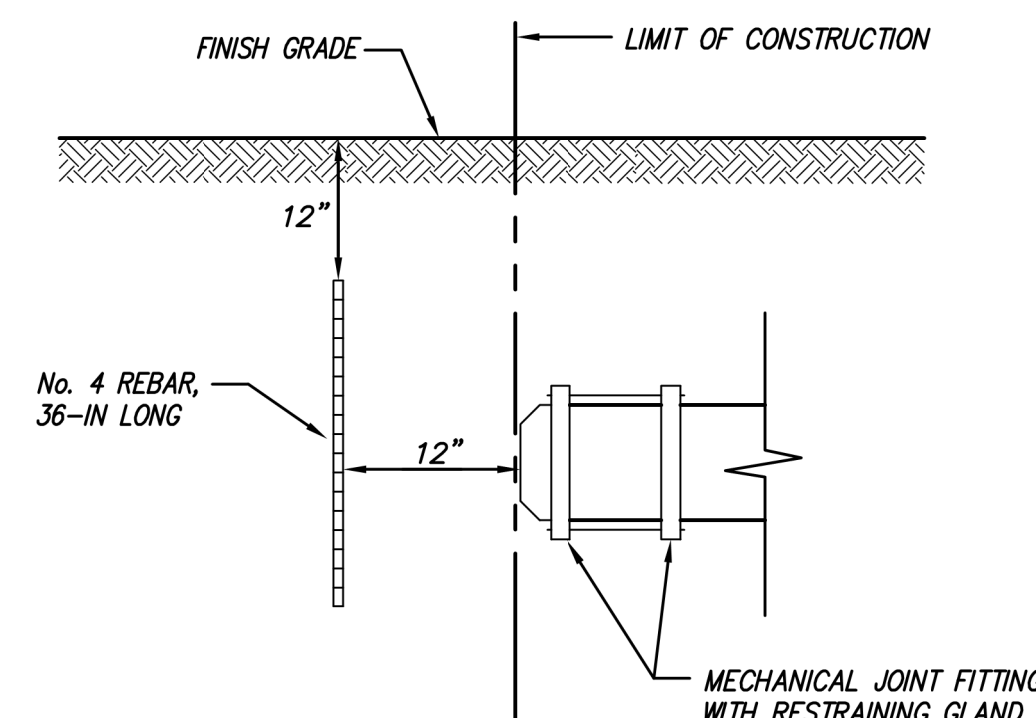
TYPICAL CONCRETE DETAILS
N.T.S. 5



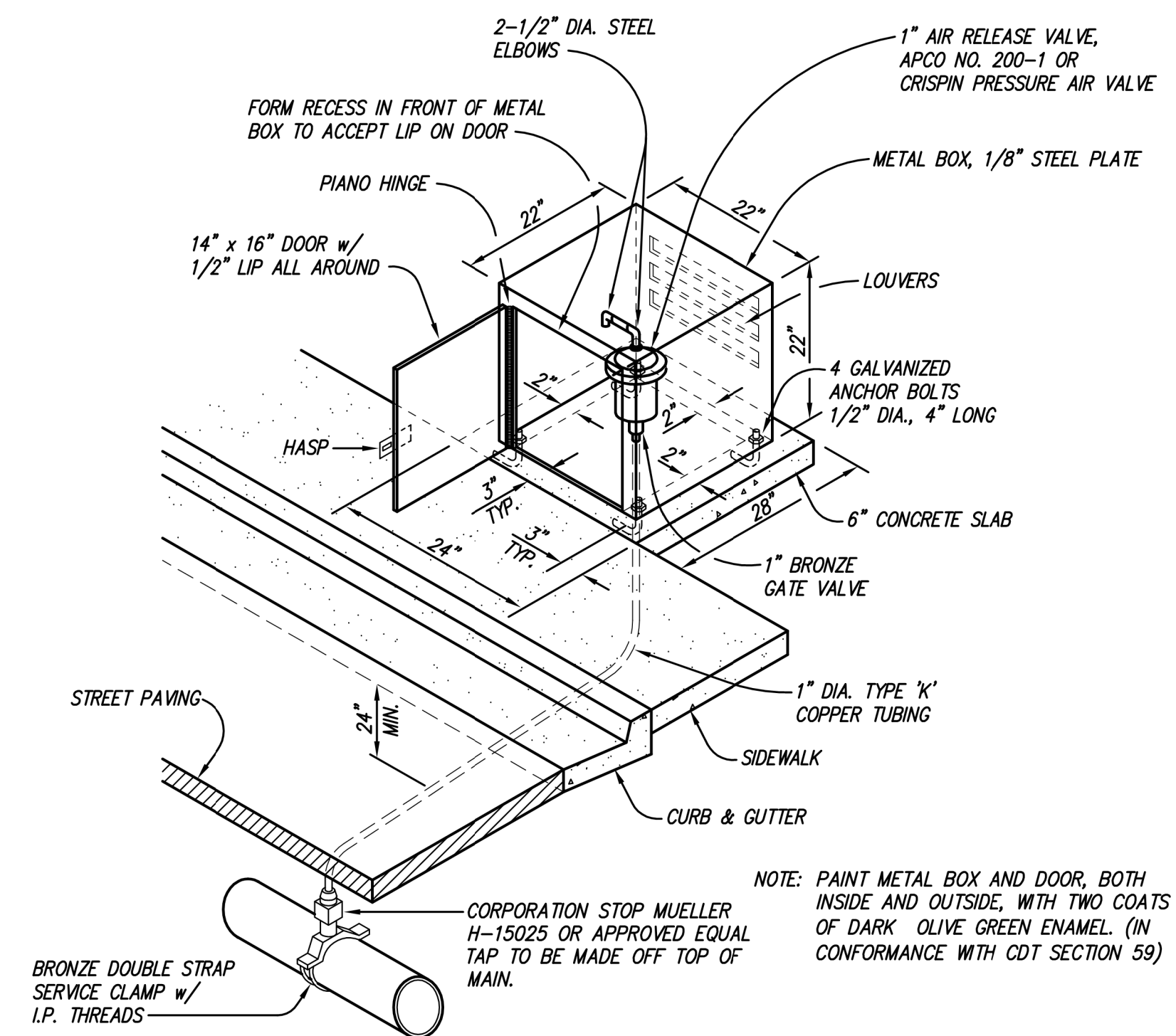
NOTE:
1. PLACE CUT OFF PLUG OF IMPERMEABLE MATERIAL WHERE ALL TRENCHES ENTER A PAVEMENT AREA.
2. D=6" MIN. FOR PIPE SIZES ≤ 12 INCHES
D=12" MIN. FOR PIPE SIZES > 12 INCHES
3. COMPACT BACKFILL AND BEDDING MATERIALS TO THE FOLLOWING PERCENT RELATIVE COMPACTION:

	TRENCH SAND	TRENCH GRAVEL	APPROVED NATIVE	IMPORTED FILL	CLASS II AGGREGATE BASE
SUBSEQUENT BACKFILL MATERIAL (UNDER PAVEMENT)	N/A	N/A	90%	95%	95%
SUBSEQUENT BACKFILL MATERIAL (IN LANDSCAPE)	N/A	N/A	85%	85%	85%
INITIAL BACKFILL MATERIAL	90%	90%	N/A	N/A	N/A
BEDDING MATERIAL	90%	90%	N/A	N/A	N/A

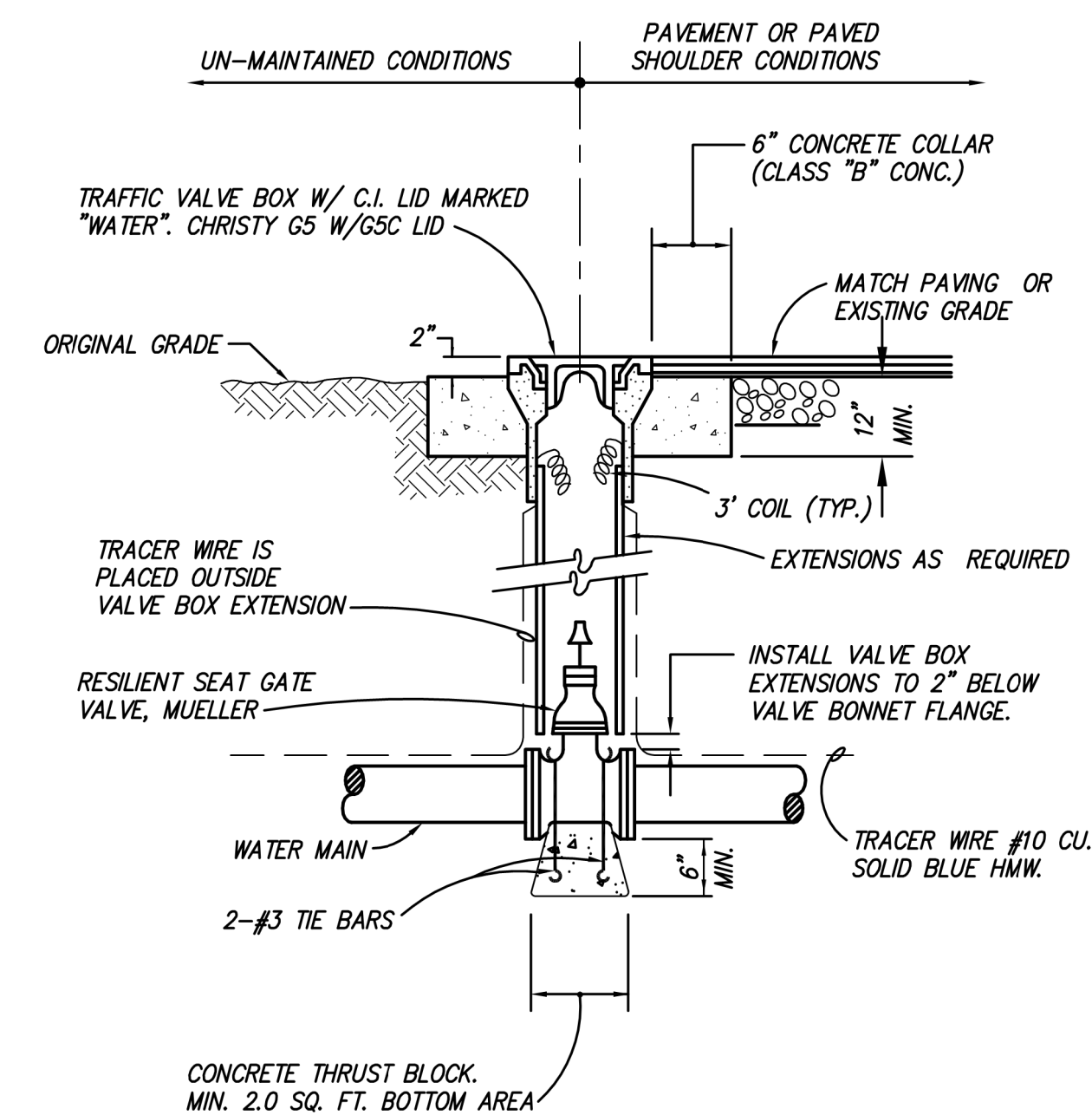
TRENCH DETAIL
N.T.S. 6



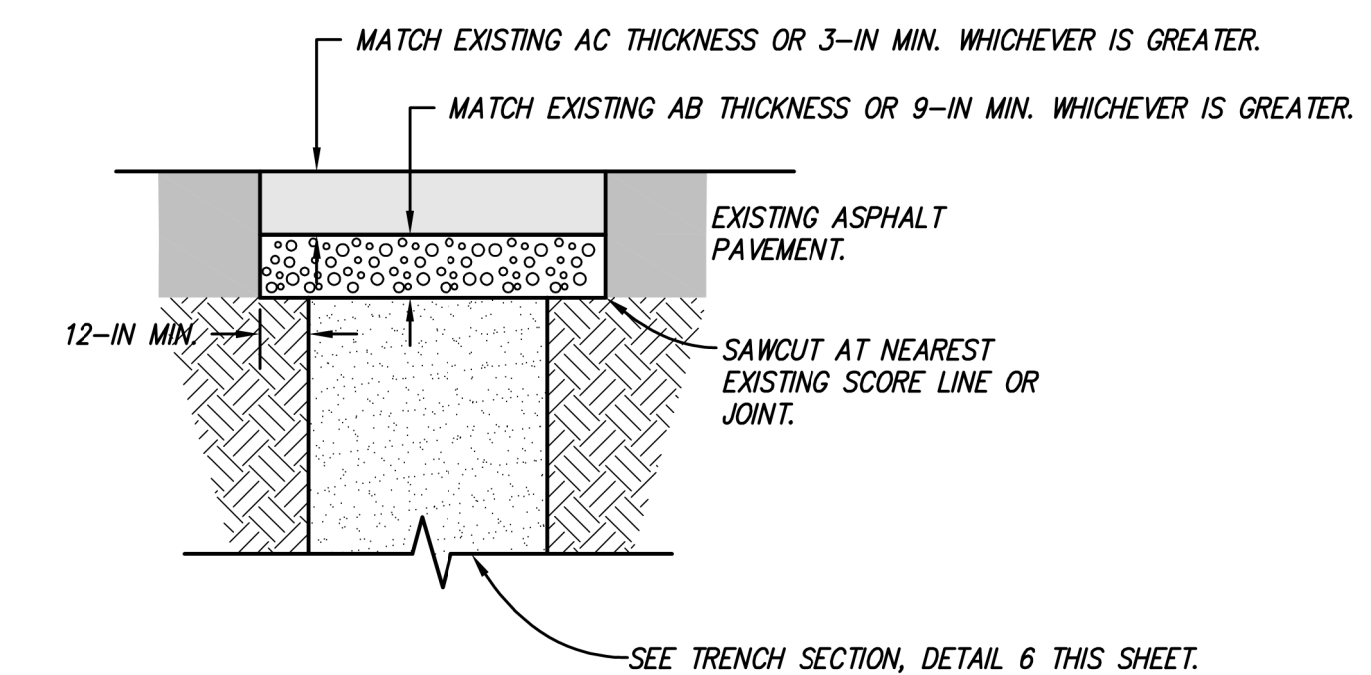
UTILITY STUB DETAIL
N.T.S. 7



AIR RELIEF VALVE ASSEMBLY
N.T.S. 8



NEW WATER LINE GATE VALVE CONNECTION DETAIL
N.T.S. 9



ASPHALT PAVEMENT TRENCH REPAIR
N.T.S. 10

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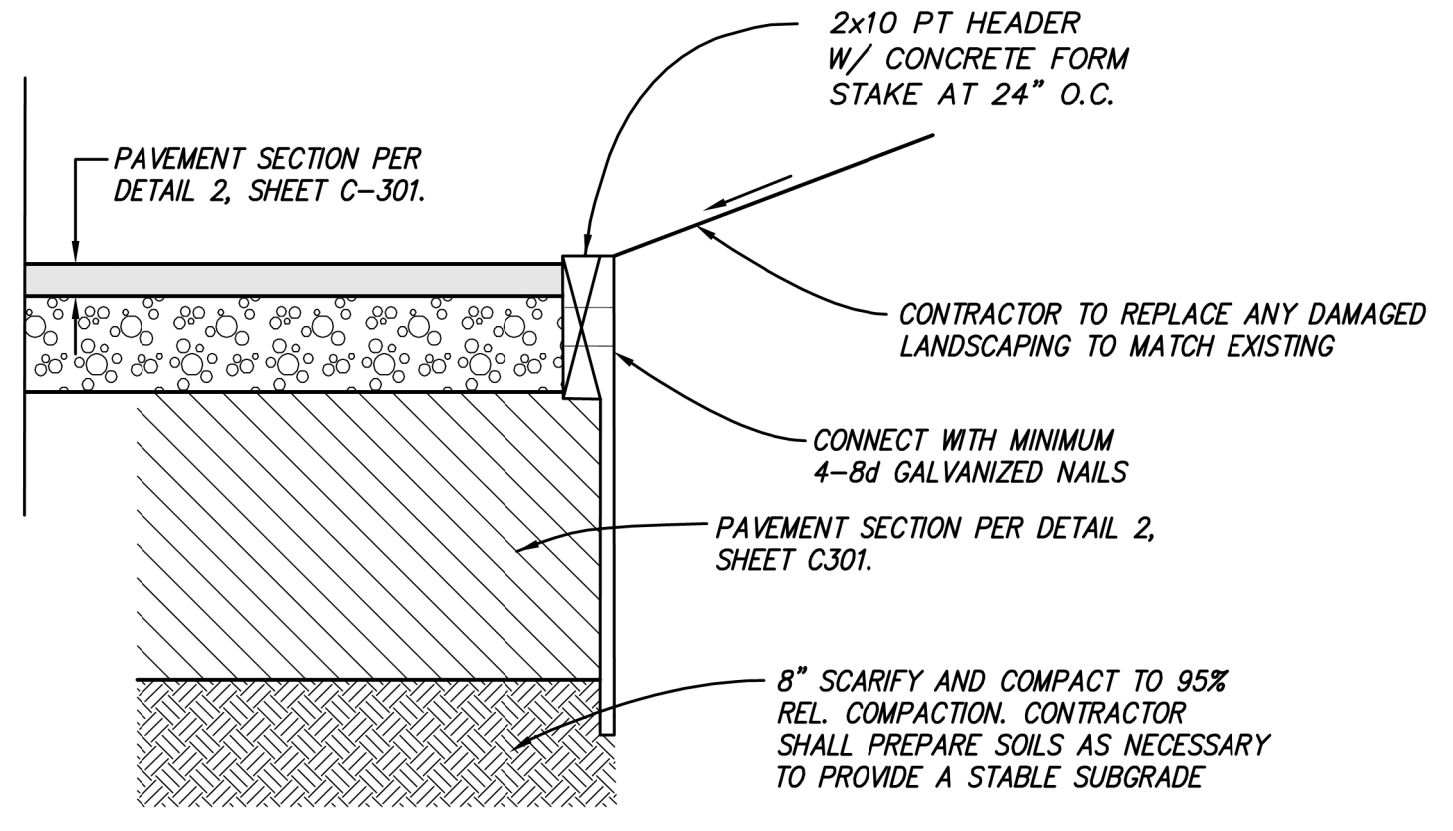
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CONSTRUCTION DETAILS

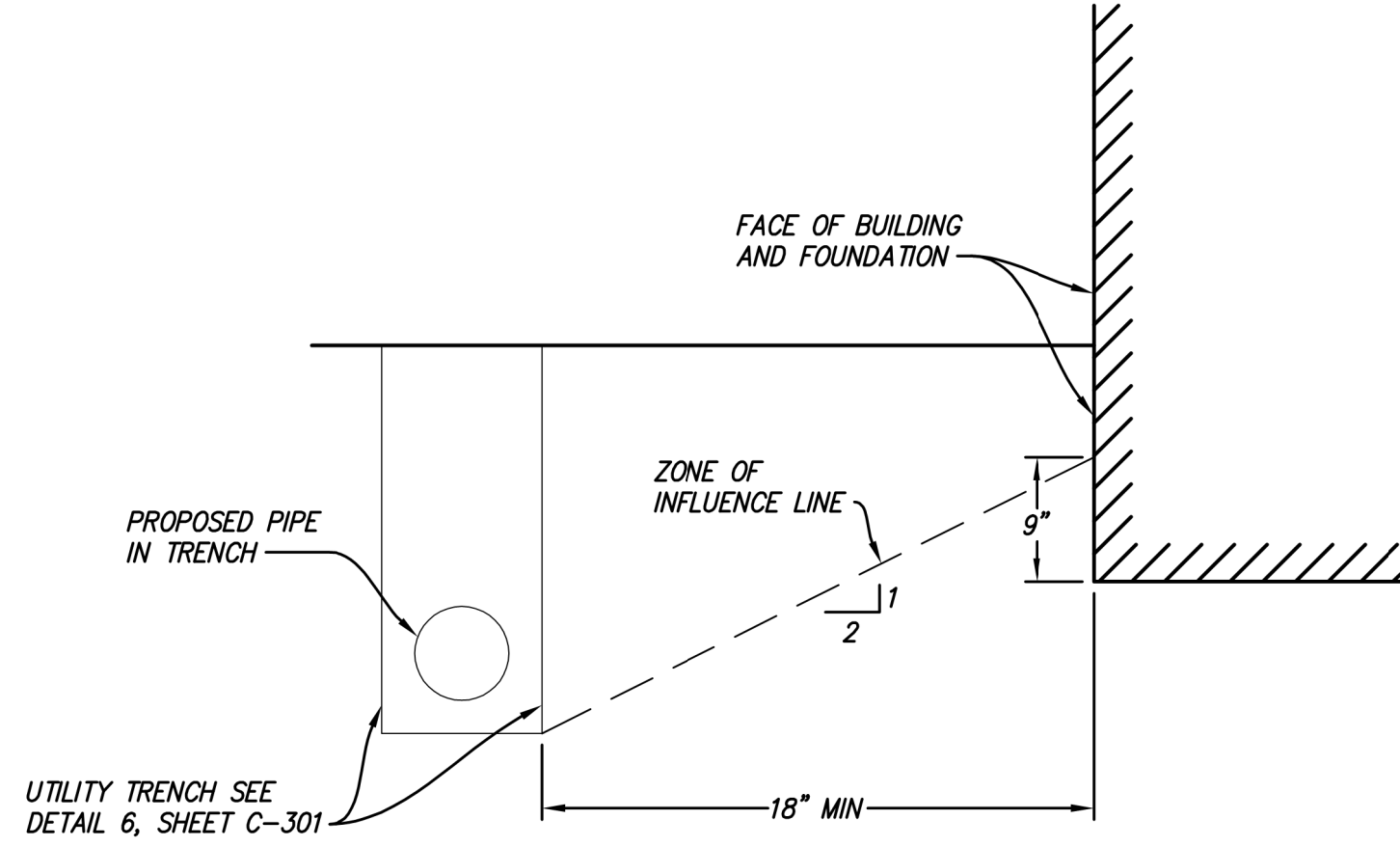
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SHEET
C-301
14 OF 15 SHEETS

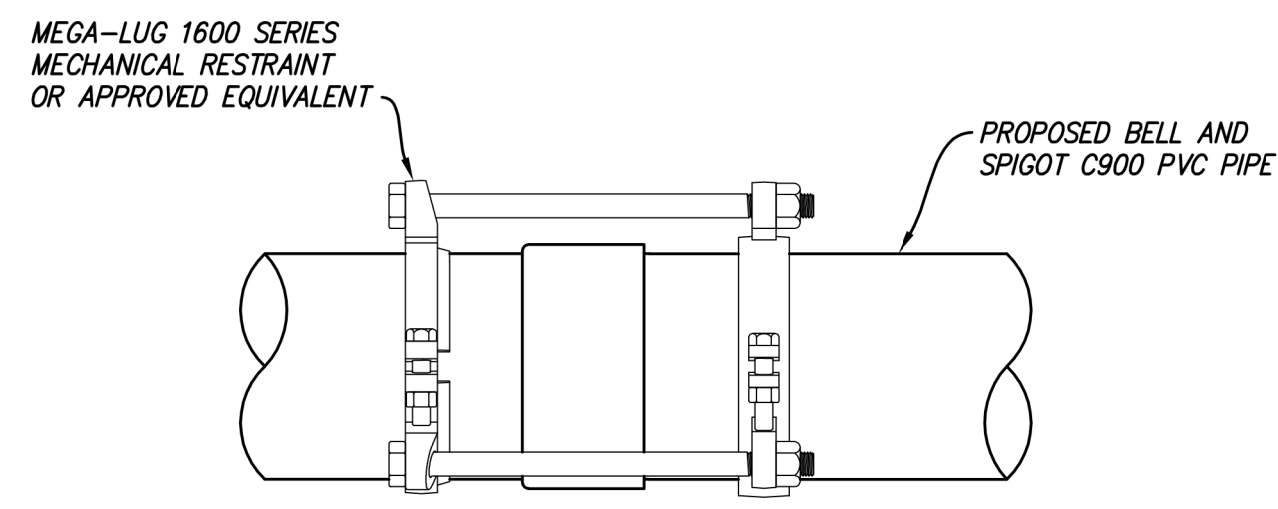
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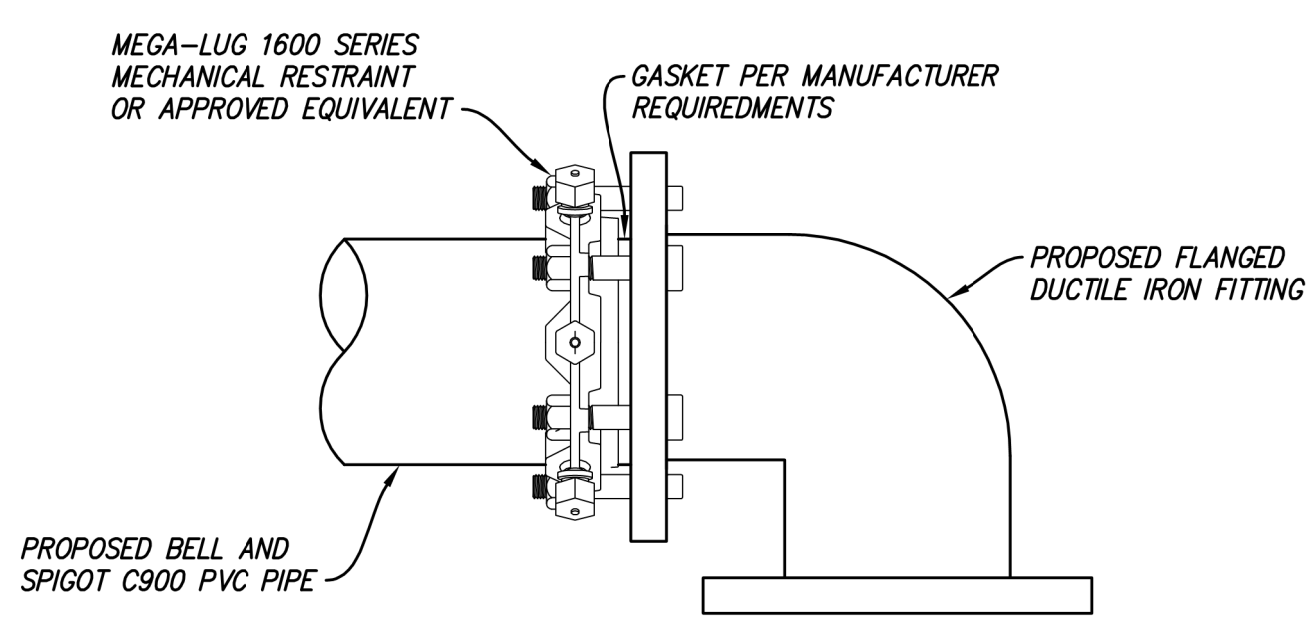
AC EDGE DETAIL ①
N.T.S.



UTILITY/FOUNDATION CLEARANCE DETAIL ②
N.T.S.



JOINT MECHANICAL RESTRAINT



FITTING MECHANICAL RESTRAINT

- NOTES:**
- NOTE: ALL MECHANICAL RESTRAINTS TO BE INSTALLED PER MANUFACTURER SPECIFICATIONS

MECHANICAL JOINT/FLANGE RESTRAINT DETAIL ③
N.T.S.

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