

VICINITY MAP
NOT TO SCALE

KEYED NOTES:

- CONTRACTOR MAY WASTE EXCESS CUT MATERIAL OR BORROW SUITABLE FILL MATERIAL FROM THIS AREA. MAINTAIN POSITIVE DRAINAGE & MATCH INTO EXISTING GRADES WITH 3:1 MAX. SLOPE.
- PREPARE AND COMPACT BUILDING FOUNDATION & SLABS PER PROJECT GEOTECHNICAL REPORT
- HEAVY DUTY PAVEMENT:
5" HBP OVER 5" ABC (REFER TO GEOTECH REPORT)
- LIGHT DUTY PAVEMENT:
4" HBP OVER 5" ABC (REFER TO GEOTECH REPORT)
- BUILDING MATERIAL STORAGE AREA
- TOPSOIL STOCKPILE AREA

ESTIMATED EARTHWORK QUANTITY:

UNCLASSIFIED EXCAVATION (TOTAL CUT) = 102,772 CY
* EMBANKMENT FILL = 101,244 CY
NET (CUT) = 1,528 CY
* (ASSUMES 15% COMPACTION FACTOR)

NOTE: THIS ESTIMATE IS PROVIDED FOR INFORMATION ONLY, REPRESENTING THE CALCULATED BULK EARTHWORK VOLUME TO FINISHED GRADE, EXCLUDING ANY ADJUSTMENT FOR PAVEMENT DEPTHS, ETC. CONTRACTOR SHALL MAKE HIS OWN DETERMINATION OF EARTHWORK QUANTITIES AS BASIS FOR BID PRICING AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

LEGEND

- PROPERTY LINE
EASEMENT
6520- PROPOSED CONTOUR
6520- EXISTING CONTOUR
99.0- PROPOSED SPOT ELEVATION (FLOWLINE)
99.0- EXIST. SPOT ELEVATION
- SF SILT FENCE
VTC VEHICLE TRACKING PAD
IP INLET PROTECTION
GB GRASS BUFFER
CWA CONCRETE WASHOUT AREA
- RR RIPRAP PAD
SM SEED & MULCH
SB SEDIMENT BASIN
EDB EXTENDED DETENTION BASIN
RG RAIN GARDEN

NOTES:
1. ALL EROSION CONTROL MEASURES SHALL CONFORM TO CITY OF COLORADO SPRINGS DRAINAGE CRITERIA MANUAL, VOLUME 2 REQUIREMENTS.
2. CONTRACTOR SHALL OBTAIN A "WORK IN THE ROW PERMIT" FOR ALL WORK IN COUNTY RIGHT-OF-WAY.

BENCHMARK:
BENCHMARK 4 BB RESET 1984 NAVD
88 DATUM ELEV.=7570.80 FOUND
BRASS CAP IN CONCRETE INT HWY 83
& HODGEN RD.

NO.	REVISION	BY	DATE
1	FOR PERMIT	JPS	4/01/19
2	COUNTY COMMENTS	JPS	4/29/19
3	COUNTY COMMENTS	JPS	8/09/19

PARCEL
#61000-00-513
PAULSON, KAREN
39.85 AC.

Label all utilities

PROPOSED DETENTION POND M3
(BY DEVELOPER)

EXISTING CULVERT

NOTE: EXISTING VEGETATION IN CHANNELS FLOWING TO WEST CHERRY CREEK ON WEST SIDE OF SH83 WILL REMAIN UNDISTURBED

PROPOSED RIGHT TURN ACCELERATION LANE

EXIST CULVERT

Label culvert extensions

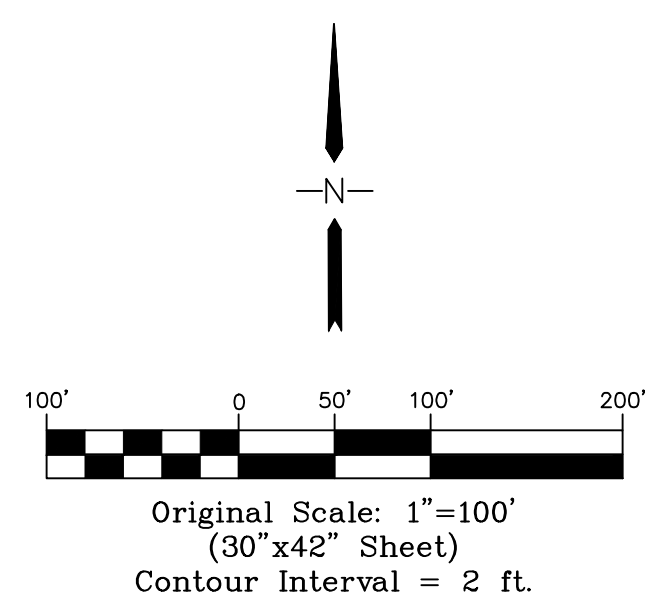
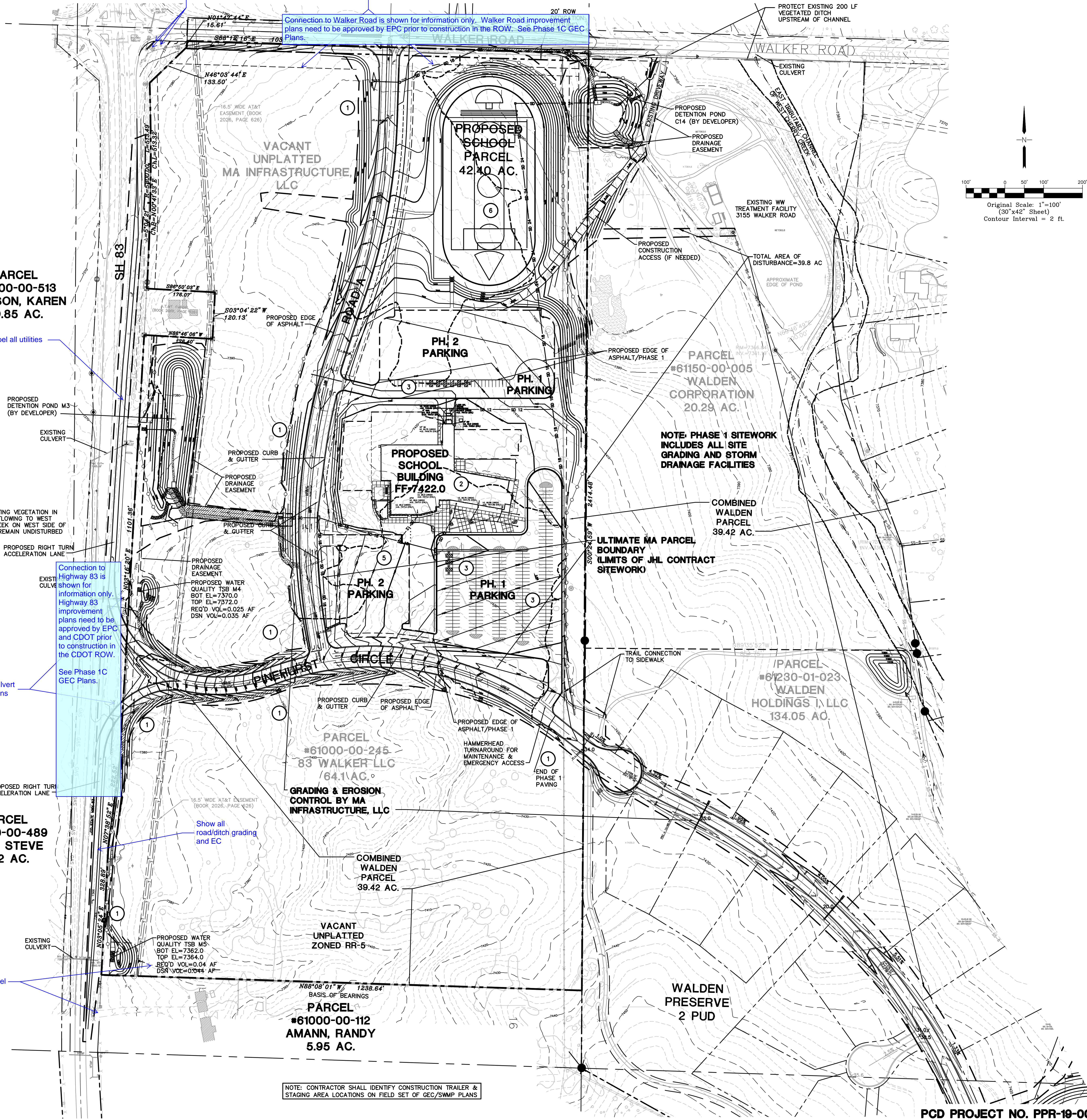
PARCEL
#61000-00-489
RAEL, STEVE
40.2 AC.

Label

EXISTING CULVERT

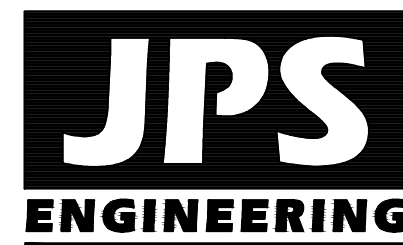
PROPOSED WATER QUALITY TSB M5
BOT EL=7362.0
TOP EL=7364.0
REQ'D VOL=0.04 AF
DSN VOL=0.044 AF

NOTE: CONTRACTOR SHALL IDENTIFY CONSTRUCTION TRAILER & STAGING AREA LOCATIONS ON FIELD SET OF GEC/SWMP PLANS



MONUMENT
ACADEMY
HIGH SCHOOL

FOR CONSTRUCTION



19 E. Willamette Ave.
Colorado Springs, CO
80903

PH: 719-477-9429
FAX: 719-471-0766
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CRP ARCHITECTS AIA
100 E. St. Vrain, Suite 300
Colorado Springs, Colorado 80903

SITE GRADING & EROSION
CONTROL PLAN

SCALE : 1"=100'

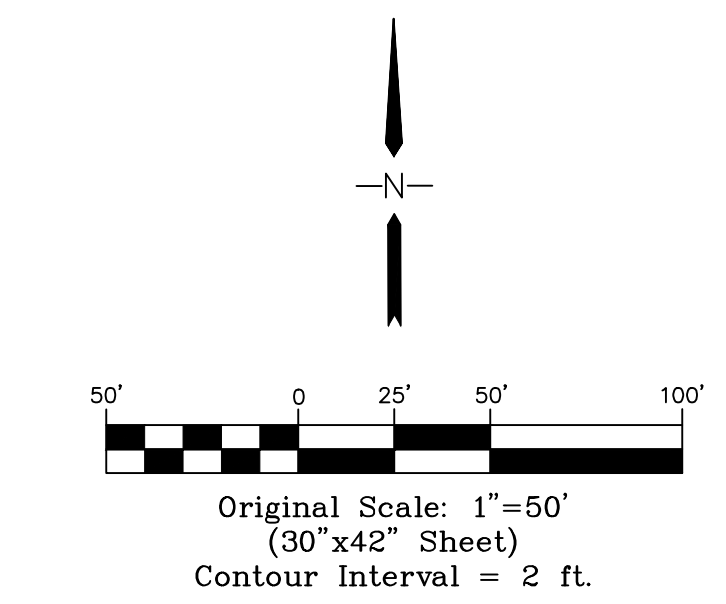
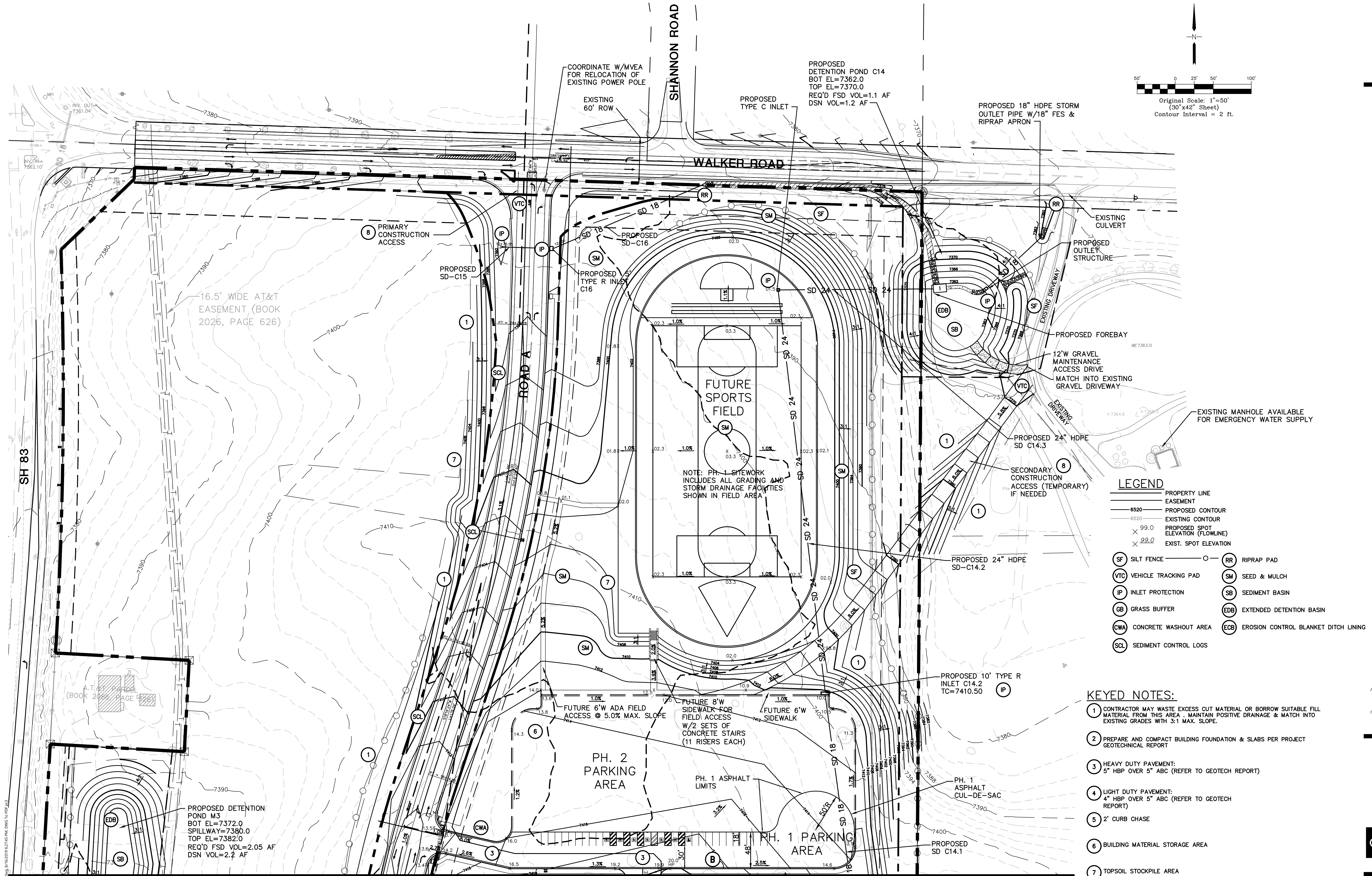
NORTH	DATE:	12/20/18
	DRAWN BY:	BJJ
	CHECKED BY:	JPS
	REVISED:	8/09/19

C2.0

PCD PROJECT NO. PPR-19-009

MONUMENT
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FOR CONSTRUCTION



LEGEND

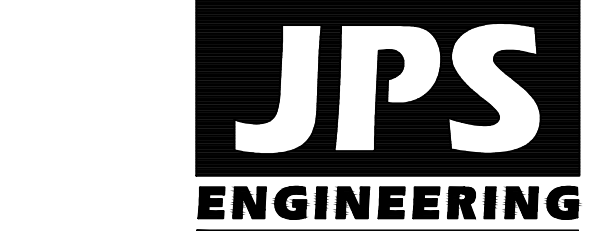
- PROPERTY LINE
- EASEMENT
- 6520 PROPOSED CONTOUR
- 6520 EXISTING CONTOUR
- 99.0 PROPOSED SPOT ELEVATION (FLOWLINE)
- 99.0 EXIST. SPOT ELEVATION
- SF SILT FENCE
- VTC VEHICLE TRACKING PAD
- IP INLET PROTECTION
- GB GRASS BUFFER
- CWA CONCRETE WASHOUT AREA
- SCL SEDIMENT CONTROL LOGS
- RR RIPRAP PAD
- SM SEED & MULCH
- SB SEDIMENT BASIN
- EDB EXTENDED DETENTION BASIN
- ECB EROSION CONTROL BLANKET DITCH LINING

KEYED NOTES:

- CONTRACTOR MAY WASTE EXCESS CUT MATERIAL OR BORROW SUITABLE FILL MATERIAL FROM THIS AREA. MAINTAIN POSITIVE DRAINAGE & MATCH INTO EXISTING GRADES WITH 3:1 MAX. SLOPE.
- PREPARE AND COMPACT BUILDING FOUNDATION & SLABS PER PROJECT GEOTECHNICAL REPORT
- HEAVY DUTY PAVEMENT:
5" HBP OVER 5" ABC (REFER TO GEOTECH REPORT)
- LIGHT DUTY PAVEMENT:
4" HBP OVER 5" ABC (REFER TO GEOTECH REPORT)
- 2' CURB CHASE
- BUILDING MATERIAL STORAGE AREA
- TOPSOIL STOCKPILE AREA
- CONSTRUCTION ACCESS ROADS SHALL MEET TRI-LAKES MONUMENT FIRE PROTECTION DISTRICT CRITERIA (MIN. 20' WIDE COMPACTED GRAVEL)

NO.	REVISION	BY	DATE
1	FOR PERMIT	JPS	4/01/19
2	COUNTY COMMENTS	JPS	4/29/19
3	COUNTY COMMENTS	JPS	8/9/19

PCD PROJECT NO. PPR-19-009



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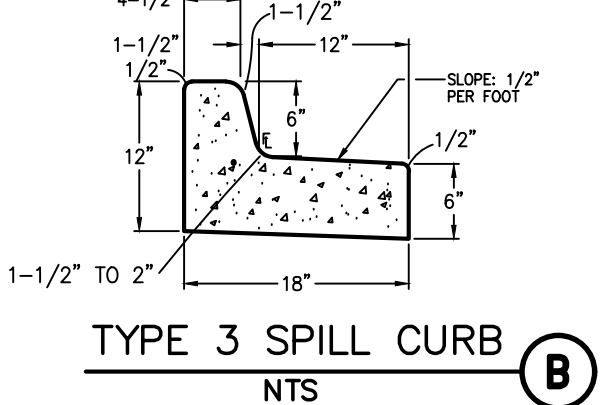
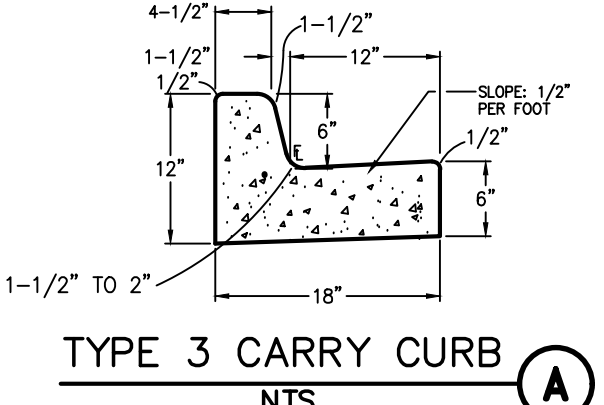
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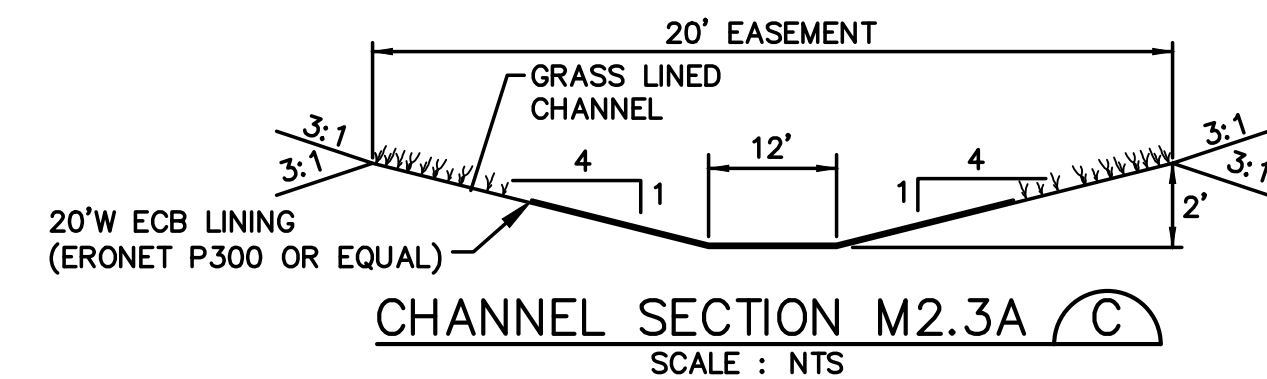
NORTH SITE GRADING & EROSION CONTROL PLAN

SCALE : 1"=50'

NORTH	DATE:	12/20/18
	DRAWN BY:	BJJ
	CHECKED BY:	JPS
	REVISED:	8/09/19

BENCHMARK:
BENCHMARK 4 BB RESET 1984 NAVD
88 DATUM ELEV.=7570.80 FOUND
BRASS CAP IN CONCRETE INT HWY 83
& HODGEN RD.





----- PROPERTY LINE
 ----- LIMITS OF DISTURBANCE
 ----- EASEMENT
 ----- 6520 ----- PROPOSED CONTOUR
 ----- 6520 ----- EXISTING CONTOUR
 X 99.0 PROPOSED SPOT
 ELEVATION (FLOWLINE)
 X 99.0 EXIST. SPOT ELEVATION

(SF) SILT FENCE ———— (RR) RIPRAP PAD ~~6520~~
 (VTC) VEHICLE TRACKING PAD (SM) SEED & MULCH
 (IP) INLET PROTECTION (SB) SEDIMENT BASIN
 (GB) GRASS BUFFER (EDB) EXTENDED DETENTION BASIN
 (CWA) CONCRETE WASHOUT AREA (ECB) EROSION CONTROL BLANKET DITCH LINING
 (ERONET P300 OR EQUAL)

1 CONTRACTOR MAY WASTE EXCESS CUT MATERIAL OR BORROW SUITABLE FILL MATERIAL FROM THIS AREA. MAINTAIN POSITIVE DRAINAGE & MATCH INTO EXISTING GRADES WITH 3:1 MAX. SLOPE.

- | NO. | REVISION | BY | DATE |
|----------|-----------------|-----|---------|
| <u>B</u> | COUNTY COMMENTS | JPS | 4/29/19 |
| <u>C</u> | COUNTY COMMENTS | JPS | 6/20/19 |

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Colorado Springs, Colorado 80903

SCALE : 1"=50'

NORTH

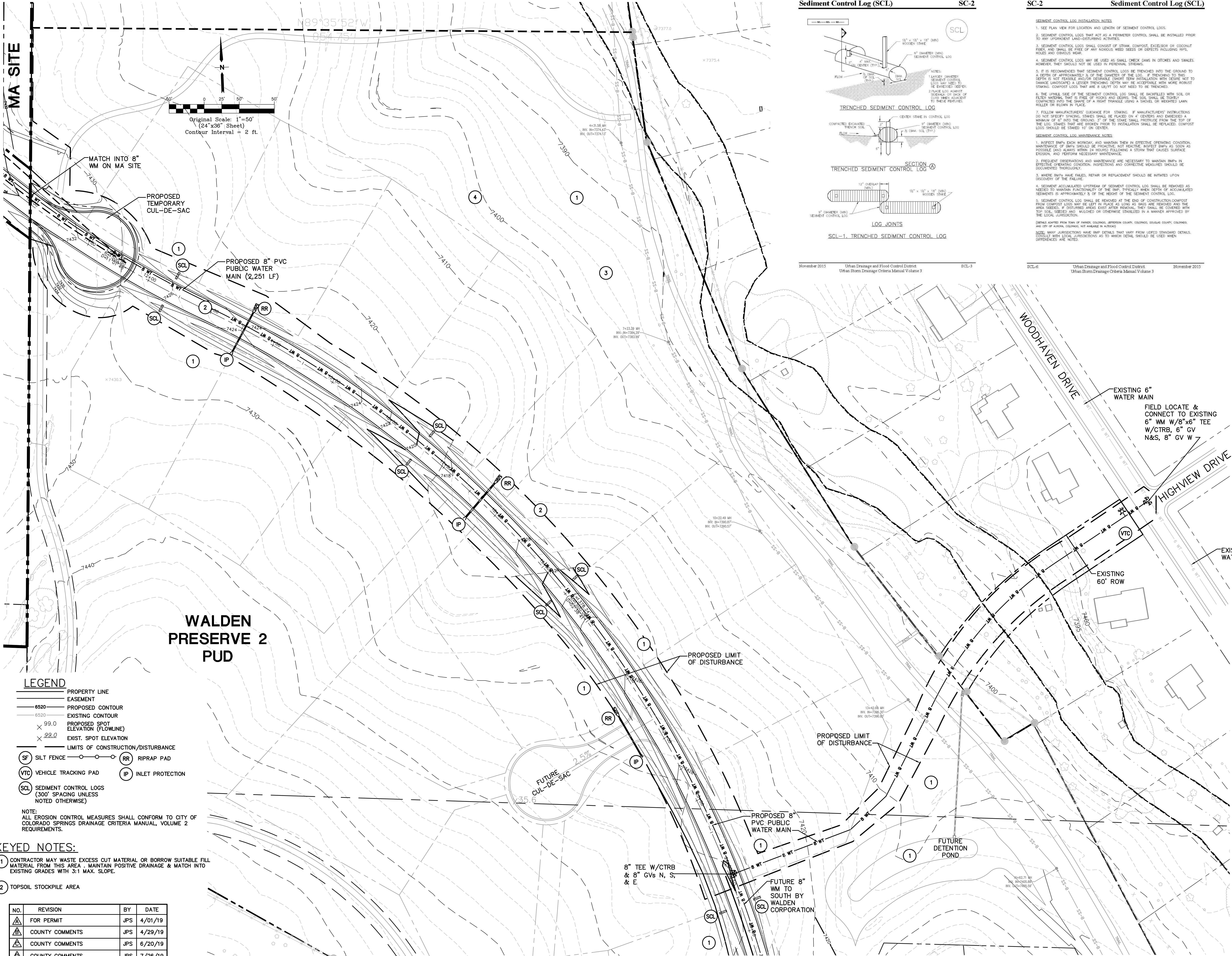
DATE: 12/20/18

DRAWN BY: BJJ

CHECKED BY: JPS

REVISED: 8/01/19

C2.2



Sediment Control Log (SCL)

SC-2

SC-2

Sediment Control Log (SCL)

SEDIMENT CONTROL LOG INSTALLATION NOTES

1. SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.
2. SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADE/ LAND- DISTURBING ACTIVITIES.
3. SEDIMENT CONTROL LOGS SHALL BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY 3/4 OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE, SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE, A DEEPER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING. COMPOST LOGS THAT ARE 8 LB/FT DO NOT NEED TO BE TRENCHED.
4. SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES; HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS.
5. IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE BACKFILLED WITH SOIL OR FILTER MATERIAL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER OR BLOWN IN PLACE.
6. THE UPWIND SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL OR FILTER MATERIAL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER OR BLOWN IN PLACE.
7. FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY STAKING, STAKES SHALL BE PLACED ON 4' CENTERS AND ENDED A MINIMUM OF 6" INTO THE GROUND. 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED. COMPOST LOGS SHOULD BE STAKED TO ON CENTER.

SEDIMENT CONTROL LOG MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOGS SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 3/4 OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.
5. SEDIMENT CONTROL LOGS SHALL BE REMOVED AT THE END OF CONSTRUCTION. COMPOST RIMP CONTROL LOGS MAY BE LEFT IN PLACE AS LONG AS SOME TERRESTRIAL AND AQUATIC AREA SEEDING, IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, JEFFERSON COUNTY, COLORADO, DOUGLAS COUNTY, COLORADO, AND CITY OF AURORA, COLORADO, NOT APPLICABLE IN AUSTIN)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM LISTED STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

November 2015 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

November 2015 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

LEGEND

- PROPERTY LINE
- EASEMENT
- PROPOSED CONTOUR
- EXISTING CONTOUR
- PROPOSED SPOT ELEVATION (FLOWLINE)
- EXIST. SPOT ELEVATION
- LIMITS OF CONSTRUCTION/DISTURBANCE
- SILT FENCE
- VEHICLE TRACKING PAD
- SEEDMENT CONTROL LOGS (300' SPACING UNLESS NOTED OTHERWISE)
- RIPRAP PAD
- INLET PROTECTION

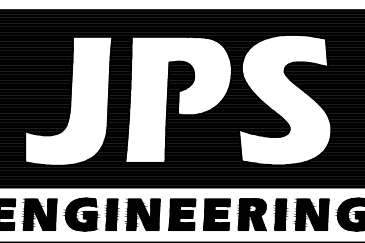
NOTE: ALL EROSION CONTROL MEASURES SHALL CONFORM TO CITY OF COLORADO SPRINGS DRAINAGE CRITERIA MANUAL, VOLUME 2 REQUIREMENTS.

KEYED NOTES:

1. CONTRACTOR MAY WASTE EXCESS CUT MATERIAL OR BORROW SUITABLE FILL MATERIAL FROM THIS AREA. MAINTAIN POSITIVE DRAINAGE & MATCH INTO EXISTING GRADES WITH 3:1 MAX. SLOPE.

2. TOPSOIL STOCKPILE AREA

NO.	REVISION	BY	DATE
1	FOR PERMIT	JPS	4/01/19
2	COUNTY COMMENTS	JPS	4/29/19
3	COUNTY COMMENTS	JPS	6/20/19
4	COUNTY COMMENTS	JPS	7/26/19



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SOUTH WATER LINE
GRADING & EROSION
CONTROL PLAN

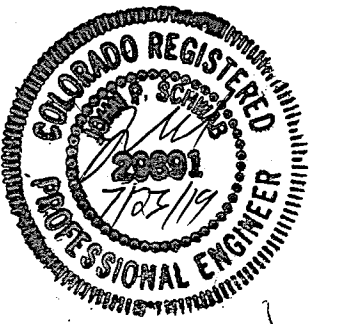
NORTH
DATE: 4/23/19
DRAWN BY: BJJ
CHECKED BY: JPS
REVISED: 7/26/19

PCD PROJECT NO. PPR-19-009

C2.3

MONUMENT
ACADEMY
HIGH SCHOOL

FOR CONSTRUCTION



JPS
ENGINEERING

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**DETENTION POND M3
PLAN & DETAILS**

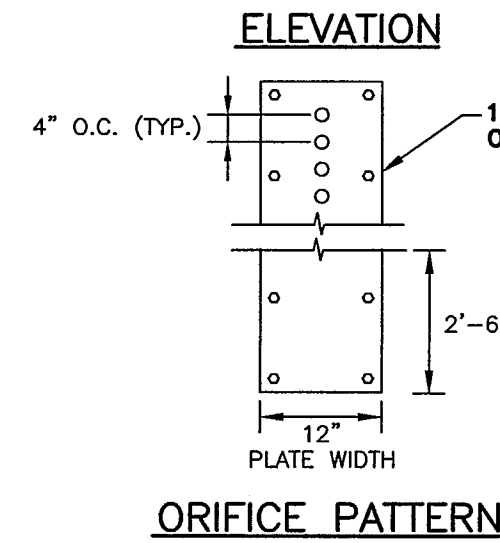
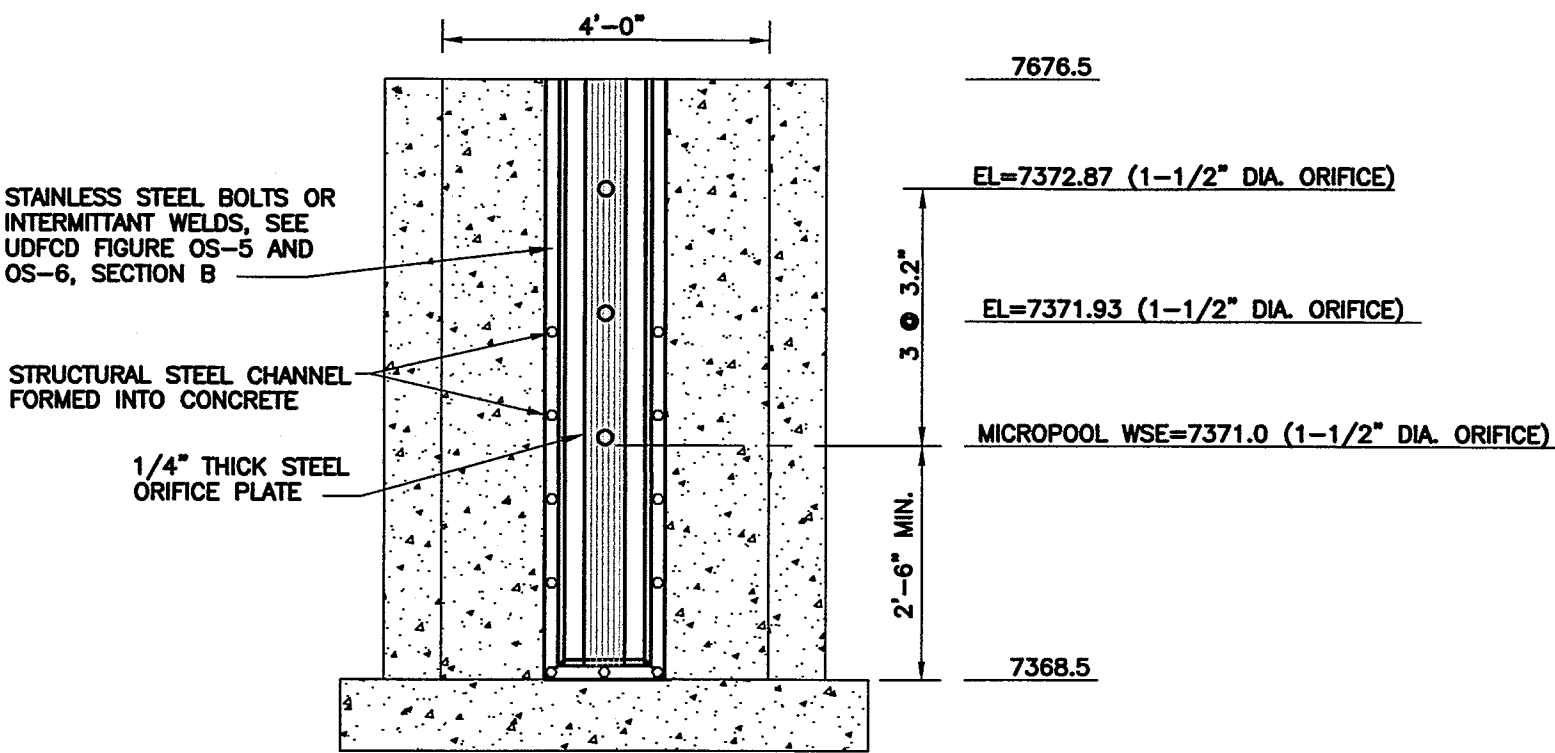
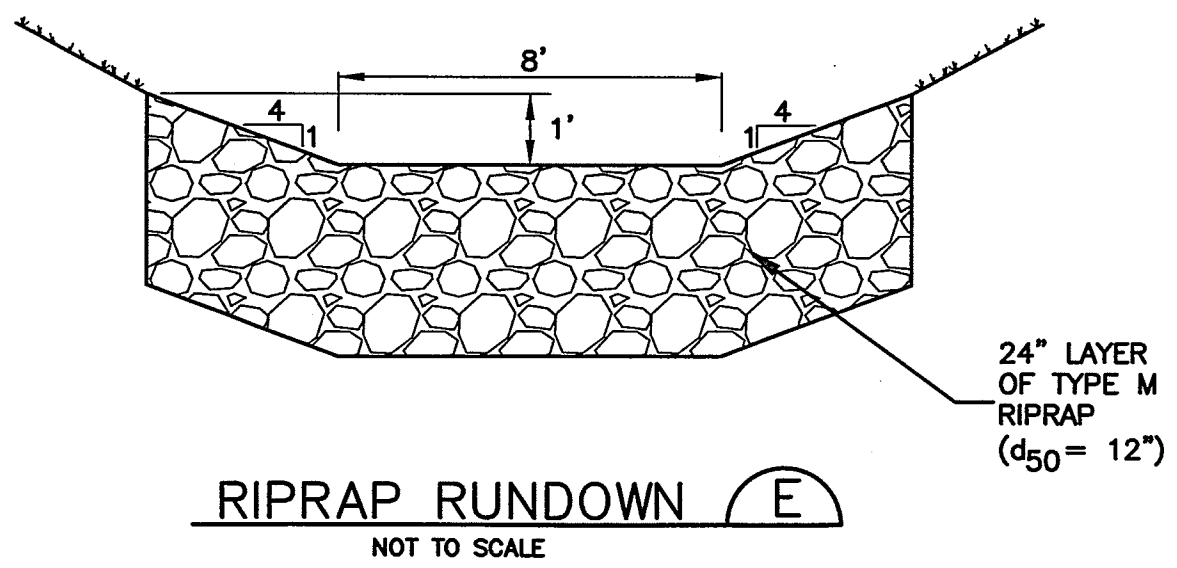
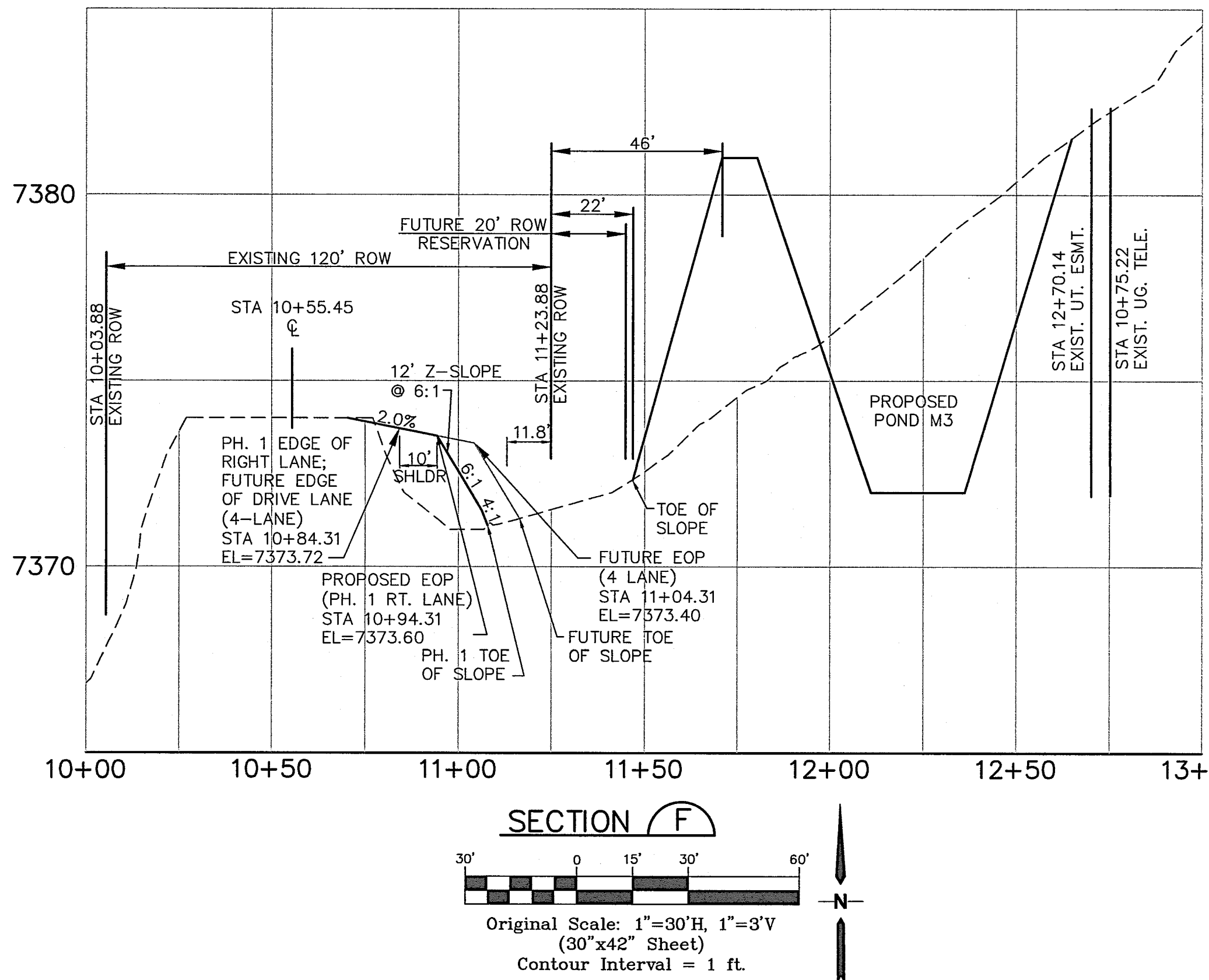
SCALE : AS SHOWN

NORTH
DATE: 12/20/18
DRAWN BY: BJJ
CHECKED BY: JPS
REVISED: 7/23/19

NO.	REVISION	BY	DATE
1	FOR PERMIT	JPS	4/17/19
2	COUNTY COMMENTS	JPS	4/29/19
3	COUNTY/CDOT COMMENTS	JPS	7/23/19

PCD PROJECT NO. PPR-19-009

C3.1



ORIFICE PLATE NOTES:

- MINIMIZE THE NUMBER OF COLUMNS.
- PROVIDE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE.
- BOLT PLATE TO CONCRETE 12" MAX. ON CENTER.

EURV AND WQCV TRASH RACKS:

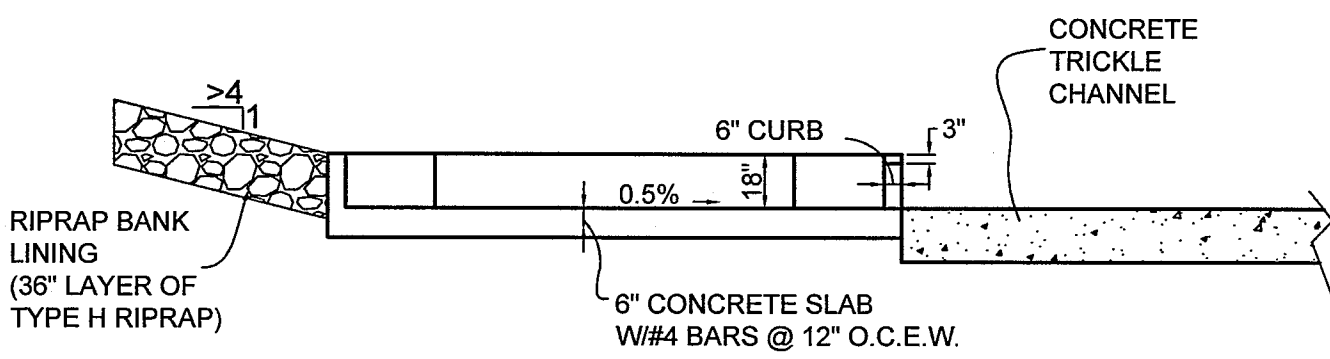
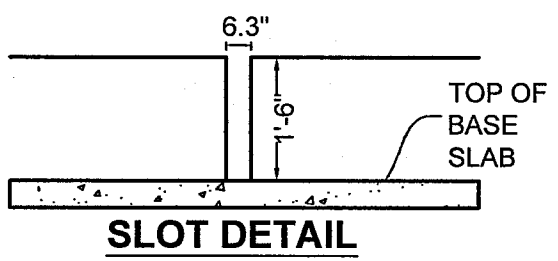
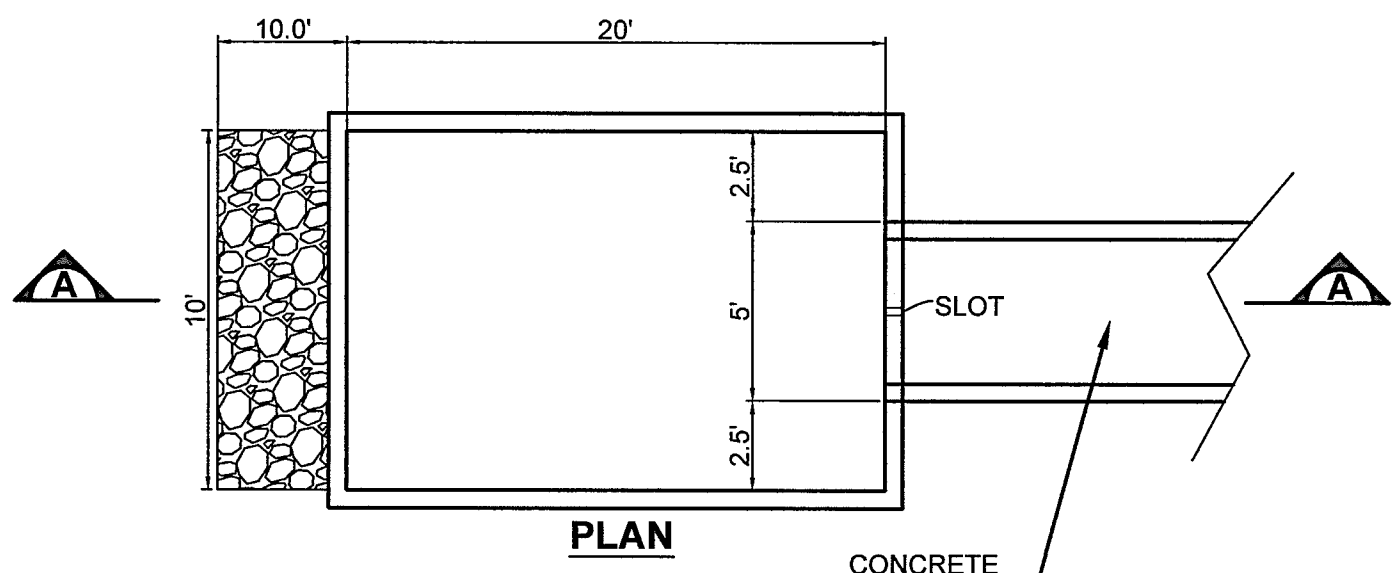
- WELL-SCREEN TRASH RACKS (FOR CIRCULAR ORIFICES) SHALL BE STAINLESS STEEL AND SHALL BE ATTACHED BY INTERMITTENT WELDS ALONG THE EDGE OF THE MOUNTING FRAME.
- STRUCTURAL DESIGN OF TRASH RACKS SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF THE RACK.

OVERFLOW TRASH RACKS:

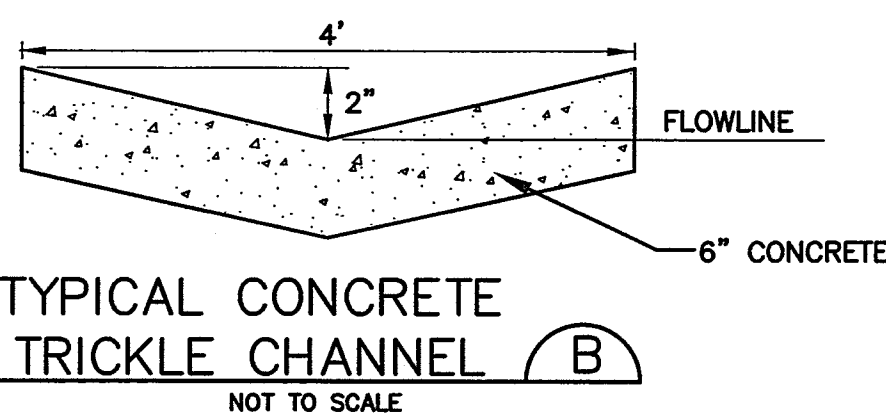
- ALL TRASH RACKS SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED AND LOCKABLE OR BOLTABLE ACCESS PANELS.
- TRASH RACKS SHALL BE STAINLESS STEEL, ALUMINUM, OR STEEL. STEEL TRASH RACKS SHALL BE HOT DIP GALVANIZED AND MAY BE HOT POWDER COATED AFTER GALVANIZING.
- TRASH RACKS SHALL BE DESIGNED SUCH THAT THE DIAGONAL DIMENSION OF EACH OPENING IS SMALLER THAN THE DIAMETER OF THE OUTLET PIPE.
- STRUCTURAL DESIGN OF TRASH RACKS SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF THE RACK.

TYPICAL WQCV ORIFICE PLATE DETAIL D

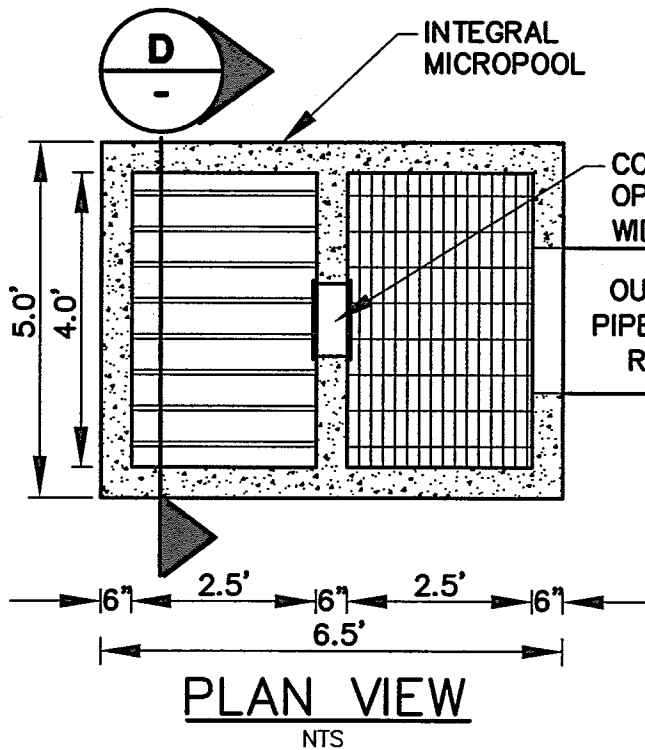
SCALE: NTS



INTEGRAL FOREBAY DETAIL A

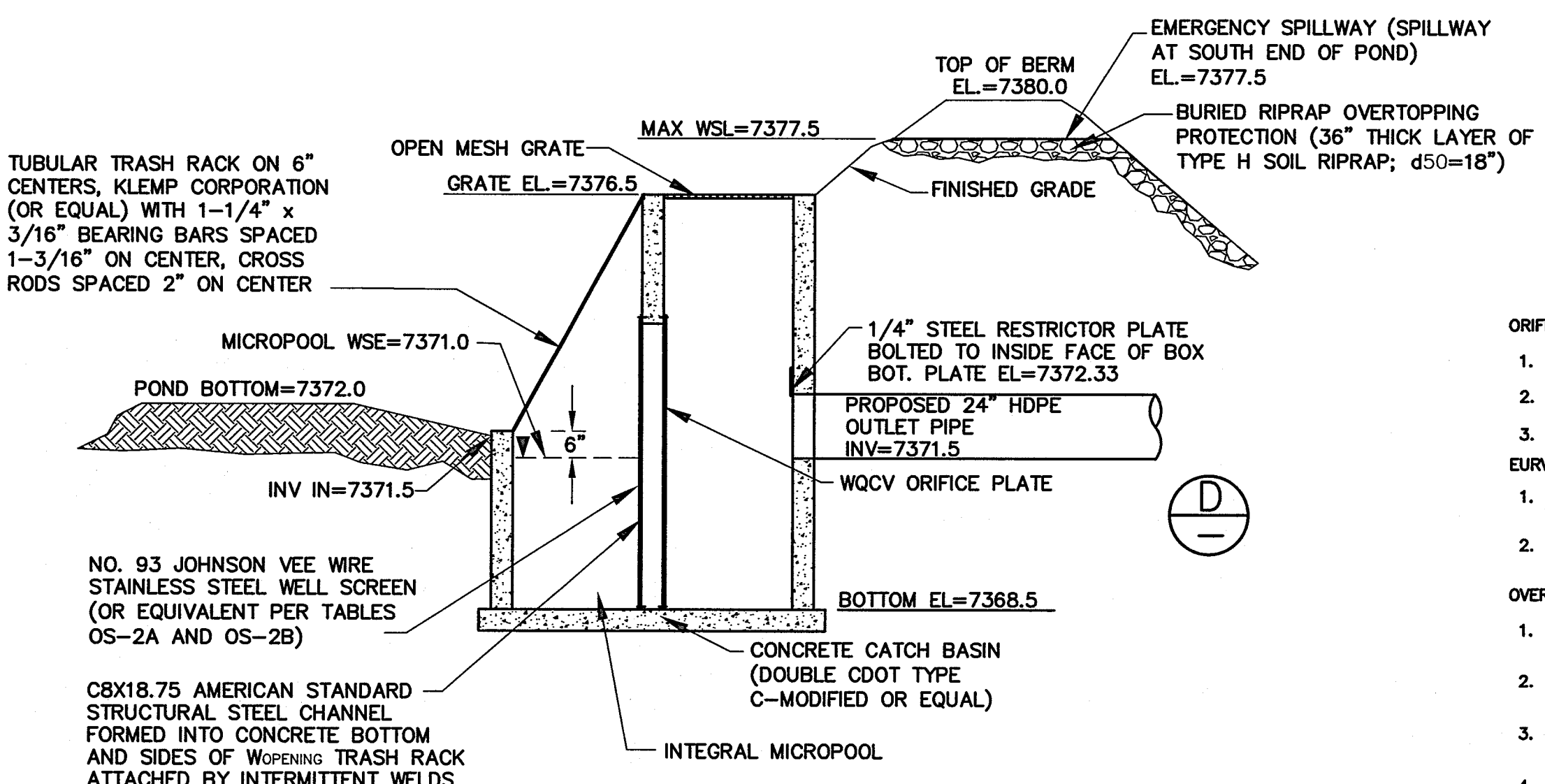


NOT TO SCALE



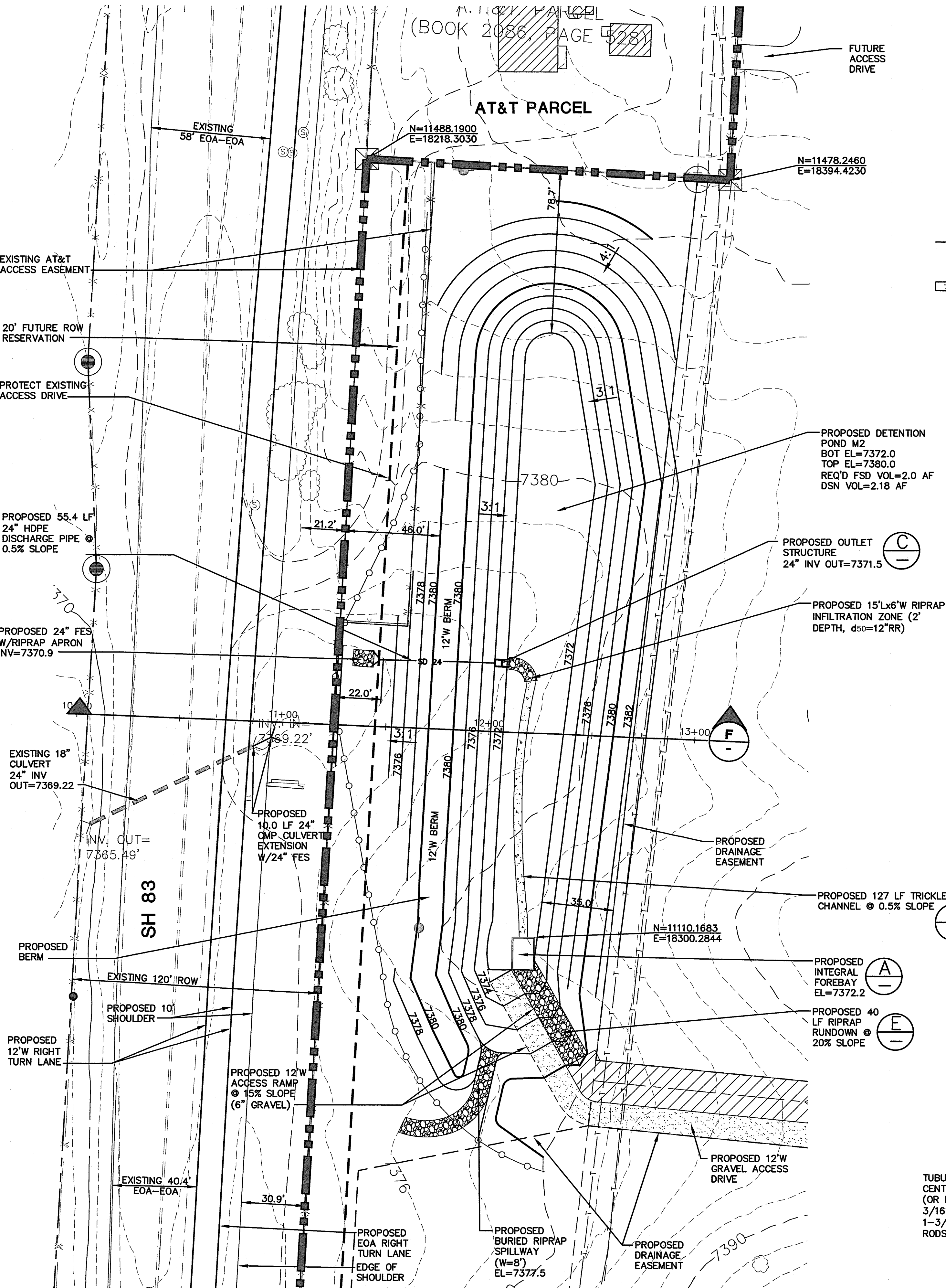
PLAN VIEW

NTS

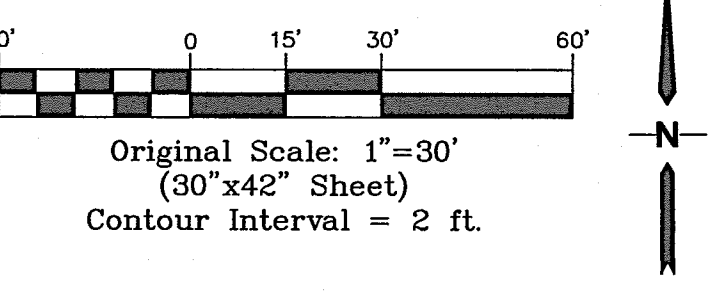


**SECTION
DETENTION POND OUTLET STRUCTURE C**

SCALE: NTS



PROPOSED DETENTION POND M3 PLAN



EMBANKMENT CONSTRUCTION NOTES:

- COMPLY WITH RECOMMENDATIONS IN PROJECT GEOTECHNICAL REPORT BY KUMAR.
- PROVIDE EMBANKMENT KEY-IN BY OVER-EXCAVATING & RE-COMPACTING MIN. 2' DEPTH & 12' WIDTH AT BASE OF EMBANKMENT.
- COMPACT FILL MATERIAL TO 100% MAX. STANDARD PROCTOR DENSITY.
- PROVIDE CONCRETE COLLAR ON POND DISCHARGE PIPE AT CENTER OF EMBANKMENT (MIN. 8" BEYOND PIPE O.D.; MIN. 12" THICK)

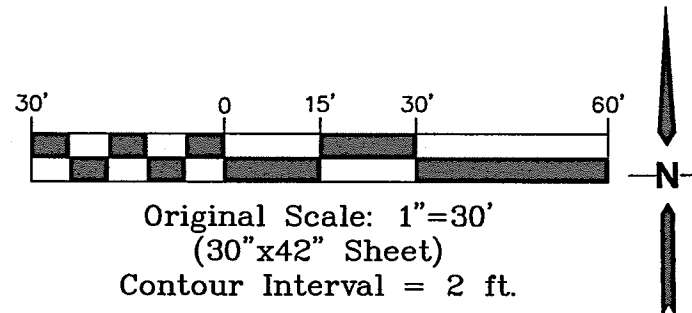
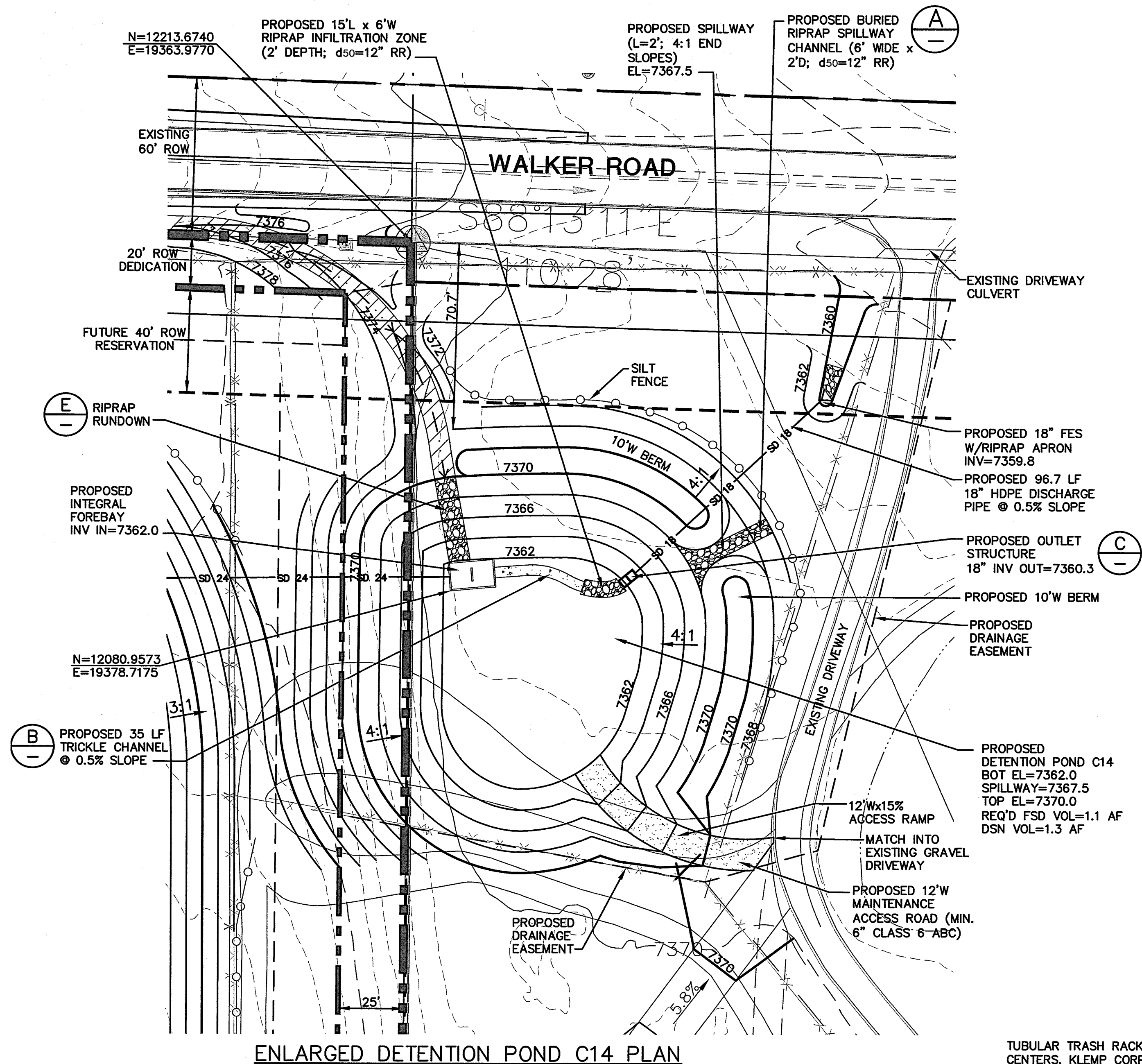
VERTICAL CONTROL POINT

BENCHMARK:
BENCHMARK 4 BB RESET 1984 NAVD
88 DATUM ELEV.=7570.80 FOUND
BRASS CAP IN CONCRETE INT HWY 83
& HODGEN RD.

Check State Engineer's standards/ recommendations.

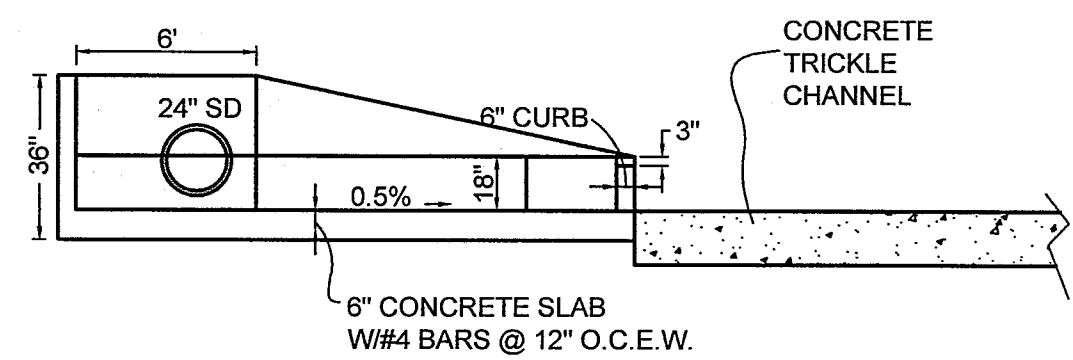
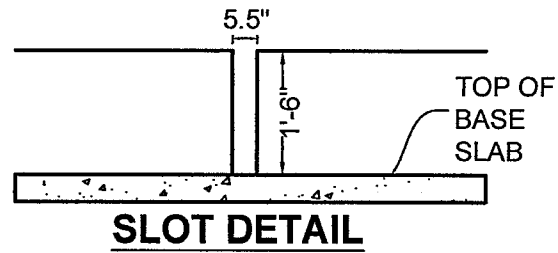
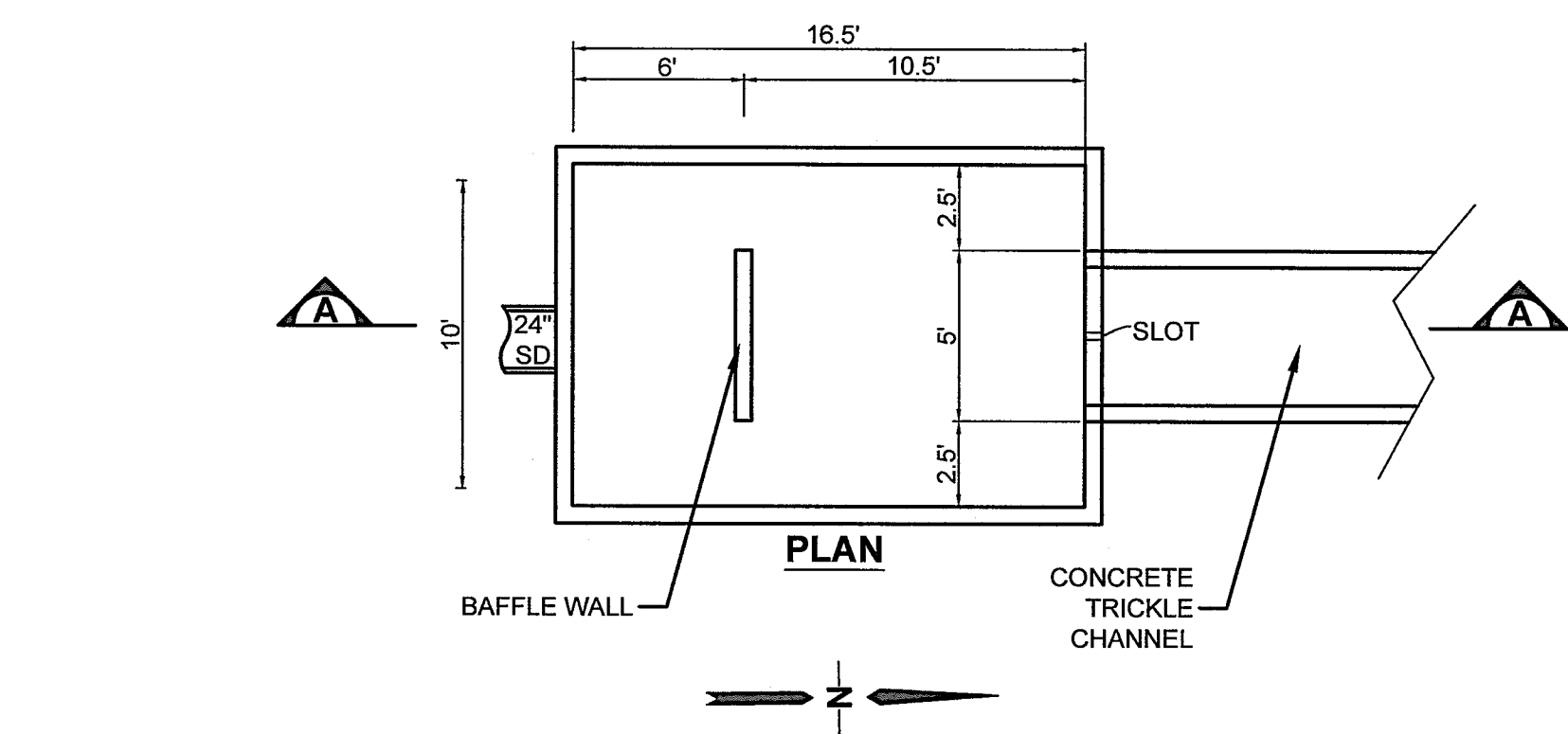
MONUMENT
ACADEMY
HIGH SCHOOL

FOR CONSTRUCTION

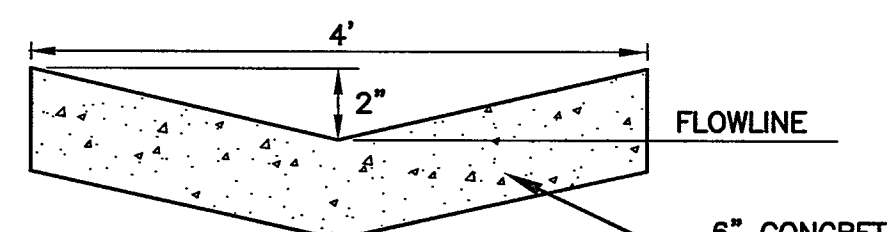


EMBANKMENT CONSTRUCTION NOTES:

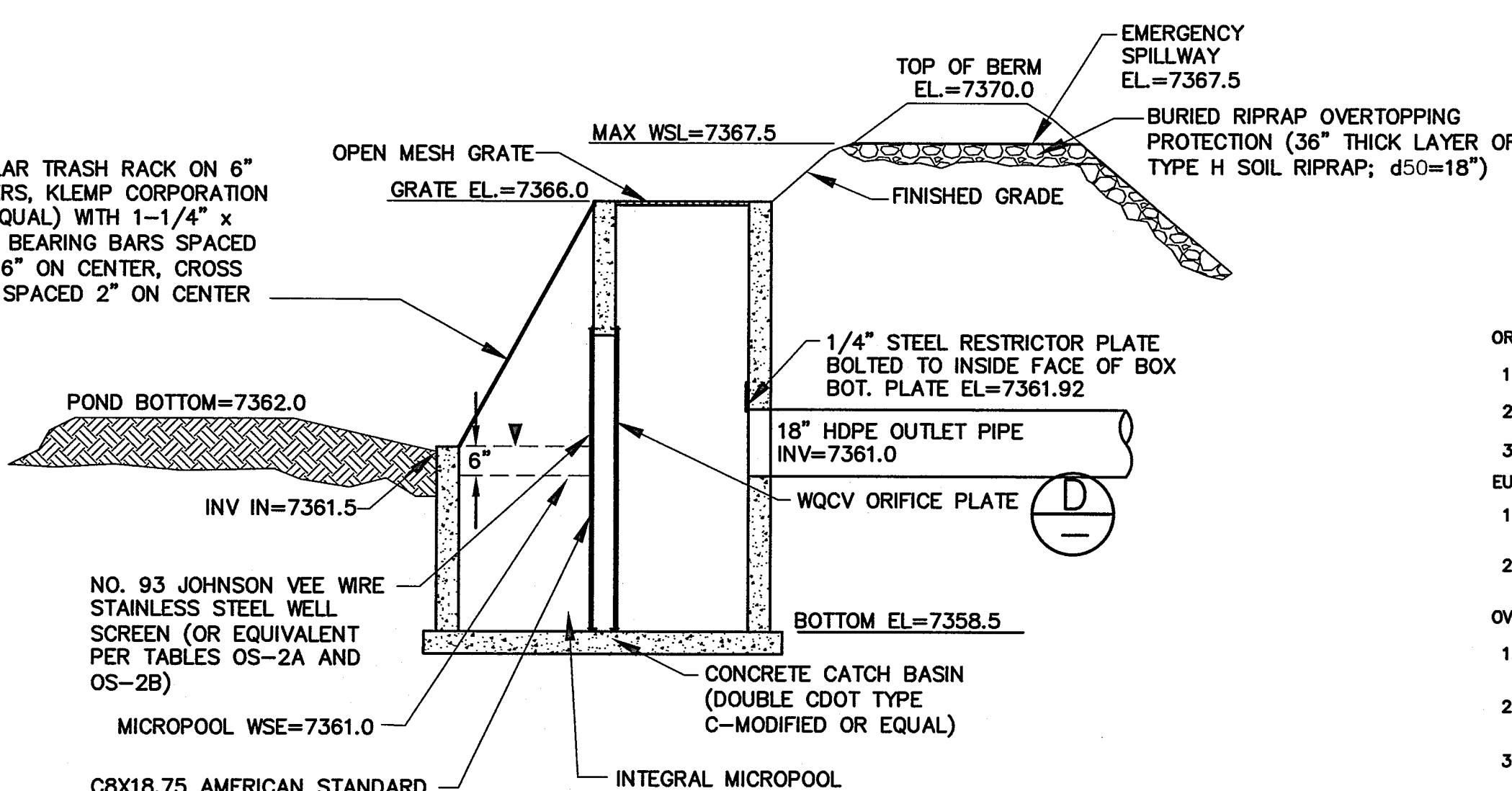
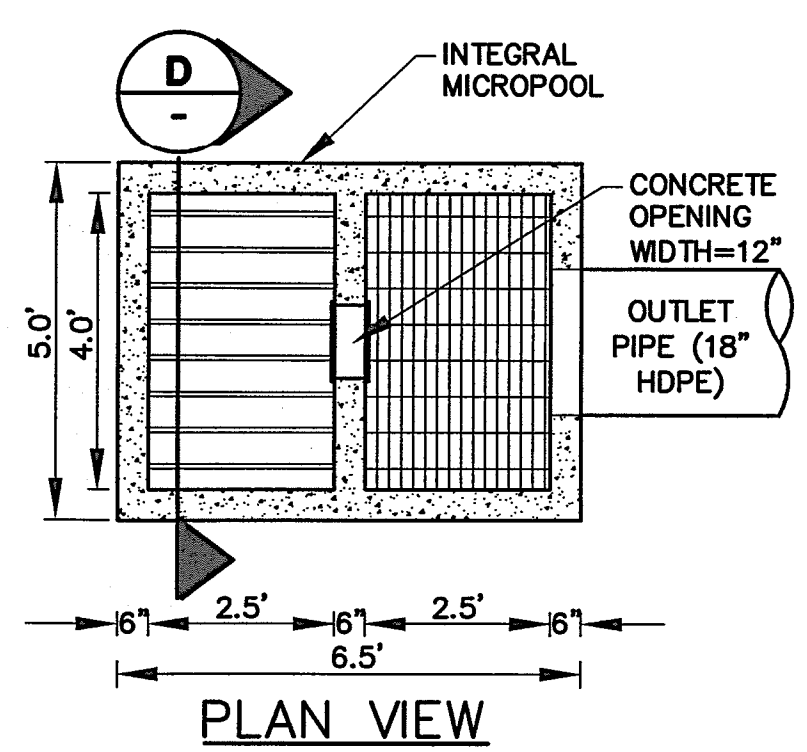
1. COMPLY WITH RECOMMENDATIONS IN PROJECT GEOTECHNICAL REPORT BY KUMAR.
2. PROVIDE EMBANKMENT KEY-IN BY OVER-EXCAVATING & RE-COMPACTING MIN. 2' DEPTH & 12' WIDTH AT BASE OF EMBANKMENT.
3. COMPACT FILL MATERIAL TO 100% MAX. STANDARD PROCTOR DENSITY.
4. PROVIDE CONCRETE COLLAR ON POND DISCHARGE PIPE AT CENTER OF EMBANKMENT (MIN. 8" BEYOND PIPE O.D.; MIN. 12" THICK)



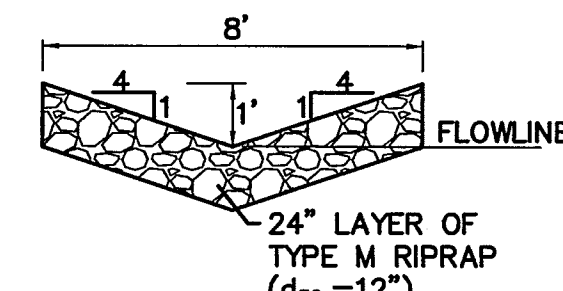
INTEGRAL FOREBAY DETAIL (A)
NOT TO SCALE



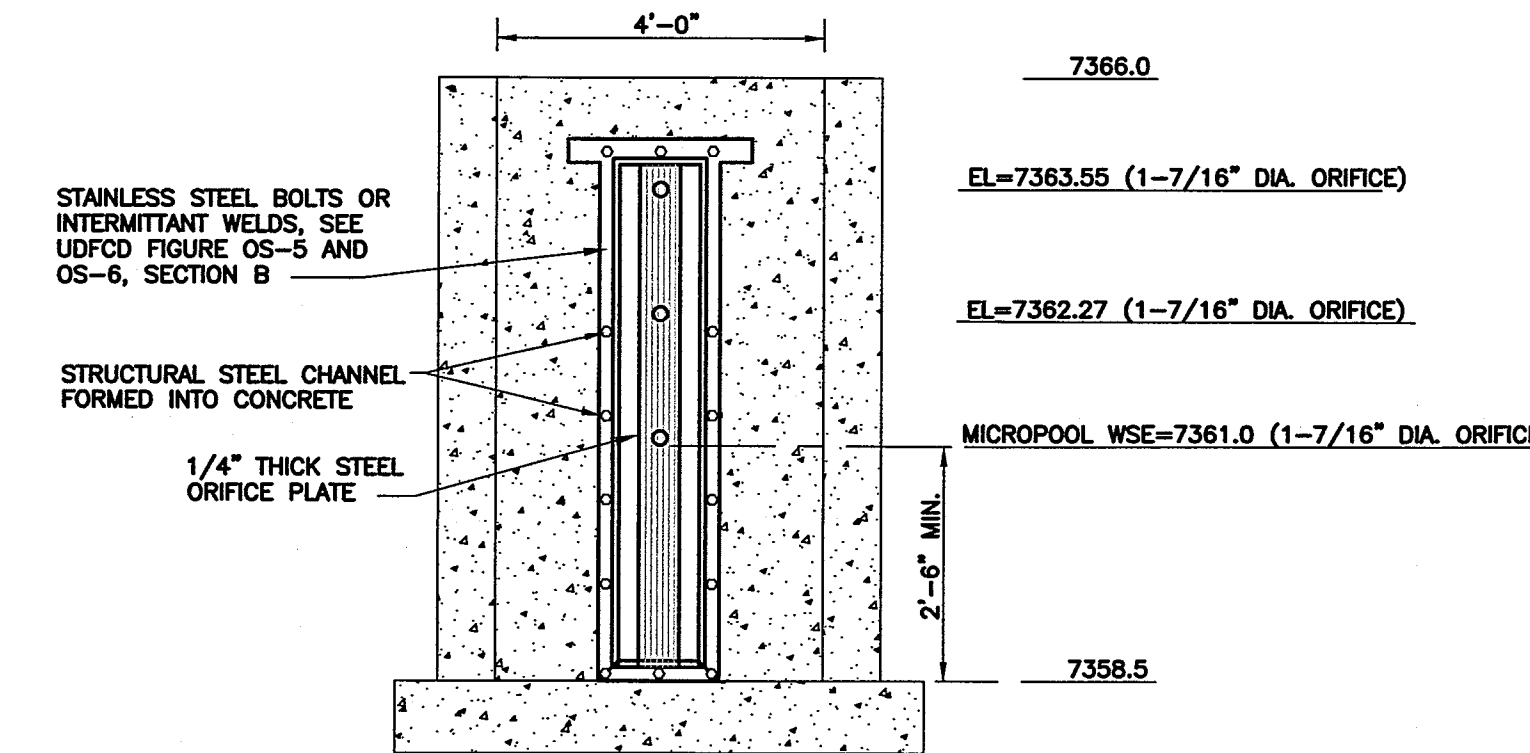
TYPICAL CONCRETE TRICKLE CHANNEL (B)
NOT TO SCALE



SECTION
DETENTION POND OUTLET STRUCTURE (C)
SCALE: NTS



RIPRAP RUNDOWN (E)
NOT TO SCALE

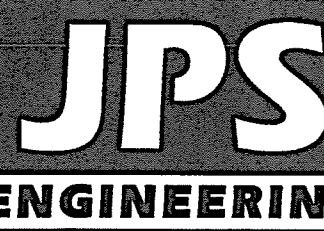


ELEVATION
ORIFICE PATTERN

- ORIFICE PLATE NOTES:
1. MINIMIZE THE NUMBER OF COLUMNS.
 2. PROVIDE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE.
 3. BOLT PLATE TO CONCRETE 12" MAX. ON CENTER.
- EMRY AND WQCV TRASH RACKS:
1. WELL-SCREEN TRASH RACKS (FOR CIRCULAR ORIFICES) SHALL BE STAINLESS STEEL AND SHALL BE ATTACHED BY INTERMITTENT WELDS ALONG THE EDGE OF THE MOUNTING FRAME.
 2. STRUCTURAL DESIGN OF TRASH RACKS SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF THE RACK.
- OVERFLOW TRASH RACKS:
1. ALL TRASH RACKS SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED AND LOCKABLE OR BOLTABLE ACCESS PANELS.
 2. TRASH RACKS SHALL BE STAINLESS STEEL, ALUMINUM, OR STEEL. STEEL TRASH RACKS SHALL BE HOT DIP GALVANIZED AND MAY BE HOT POWDER COATED AFTER GALVANIZING.
 3. TRASH RACKS SHALL BE DESIGNED SUCH THAT THE DIAGONAL DIMENSION OF EACH OPENING IS SMALLER THAN THE DIAMETER OF THE OUTLET PIPE.
 4. STRUCTURAL DESIGN OF TRASH RACKS SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF THE RACK.

TYPICAL WQCV ORIFICE PLATE DETAIL (D)
SCALE: NTS

NO.	REVISION	BY	DATE
1	FOR PERMIT	JPS	4/17/19
2	COUNTY COMMENTS	JPS	4/29/19
3	COUNTY COMMENTS	JPS	6/20/19
4	COUNTY COMMENTS	JPS	7/11/19



19 E. Wilamette Ave.
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80903
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FAX: 719-471-0766
www.jpsengr.com

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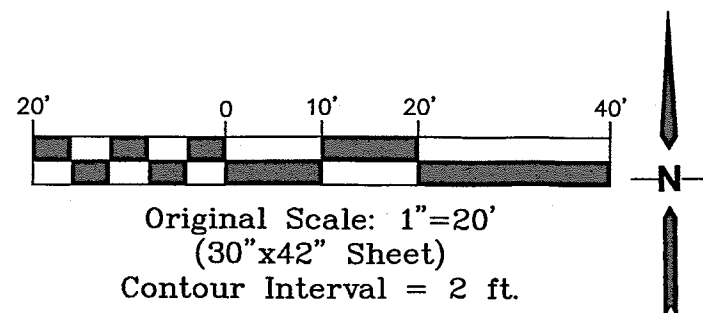
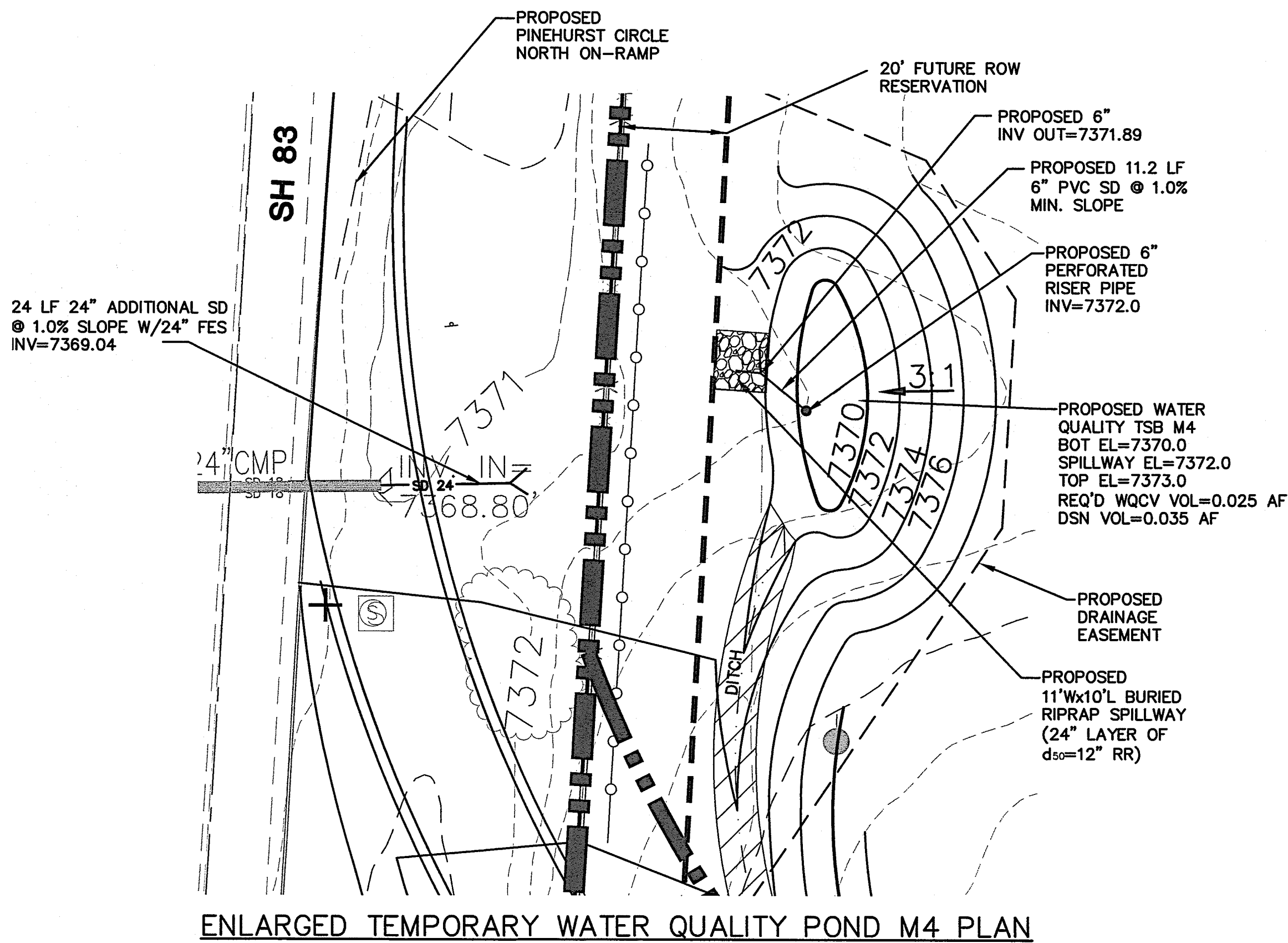
DETENTION POND C14
PLAN & DETAILS

SCALE : AS SHOWN

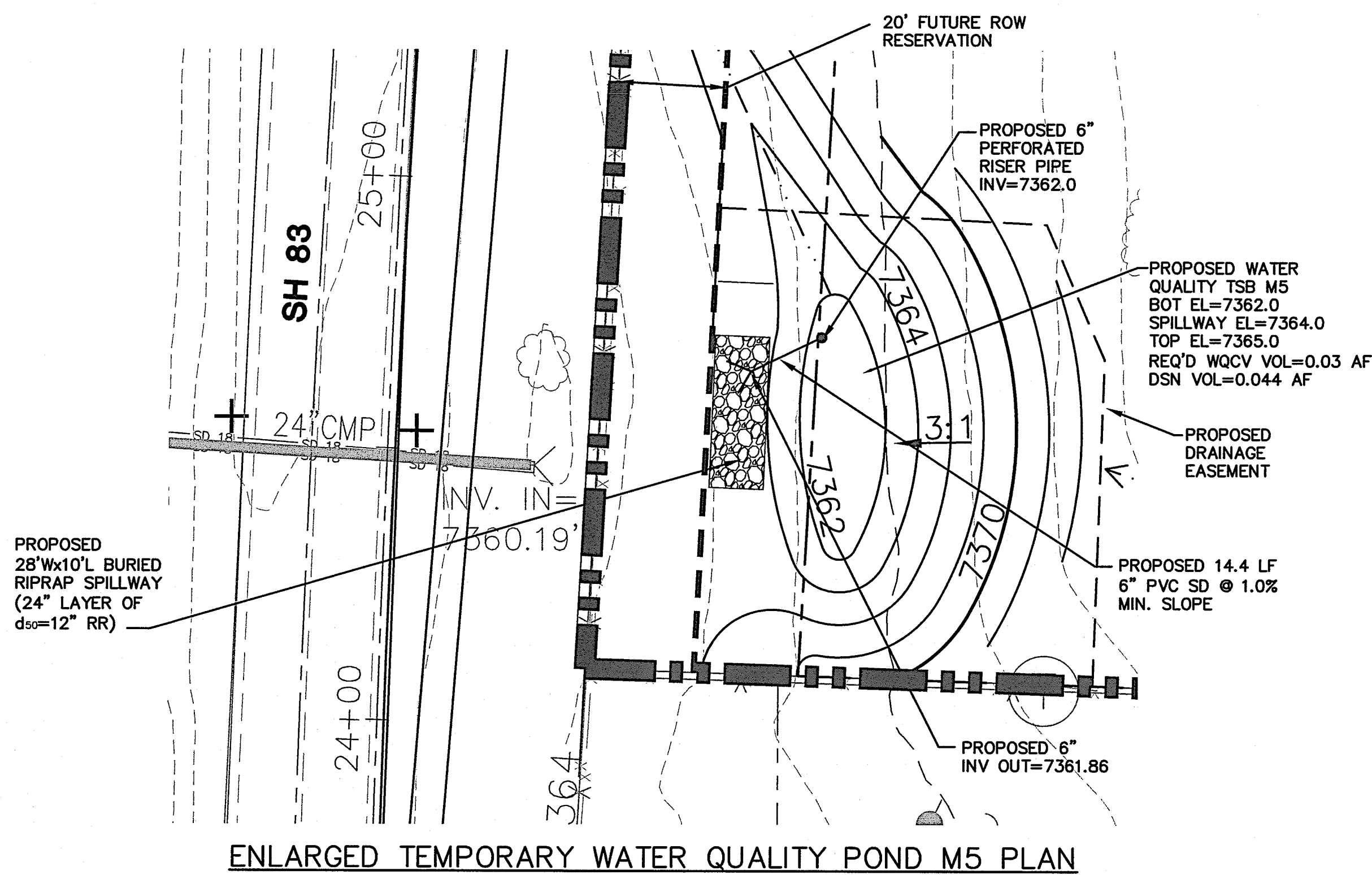
NORTH
DATE: 12/20/18
DRAWN BY: BJJ
CHECKED BY: JPS
REVISED: 7/11/19

MONUMENT
ACADEMY
HIGH SCHOOL

FOR CONSTRUCTION

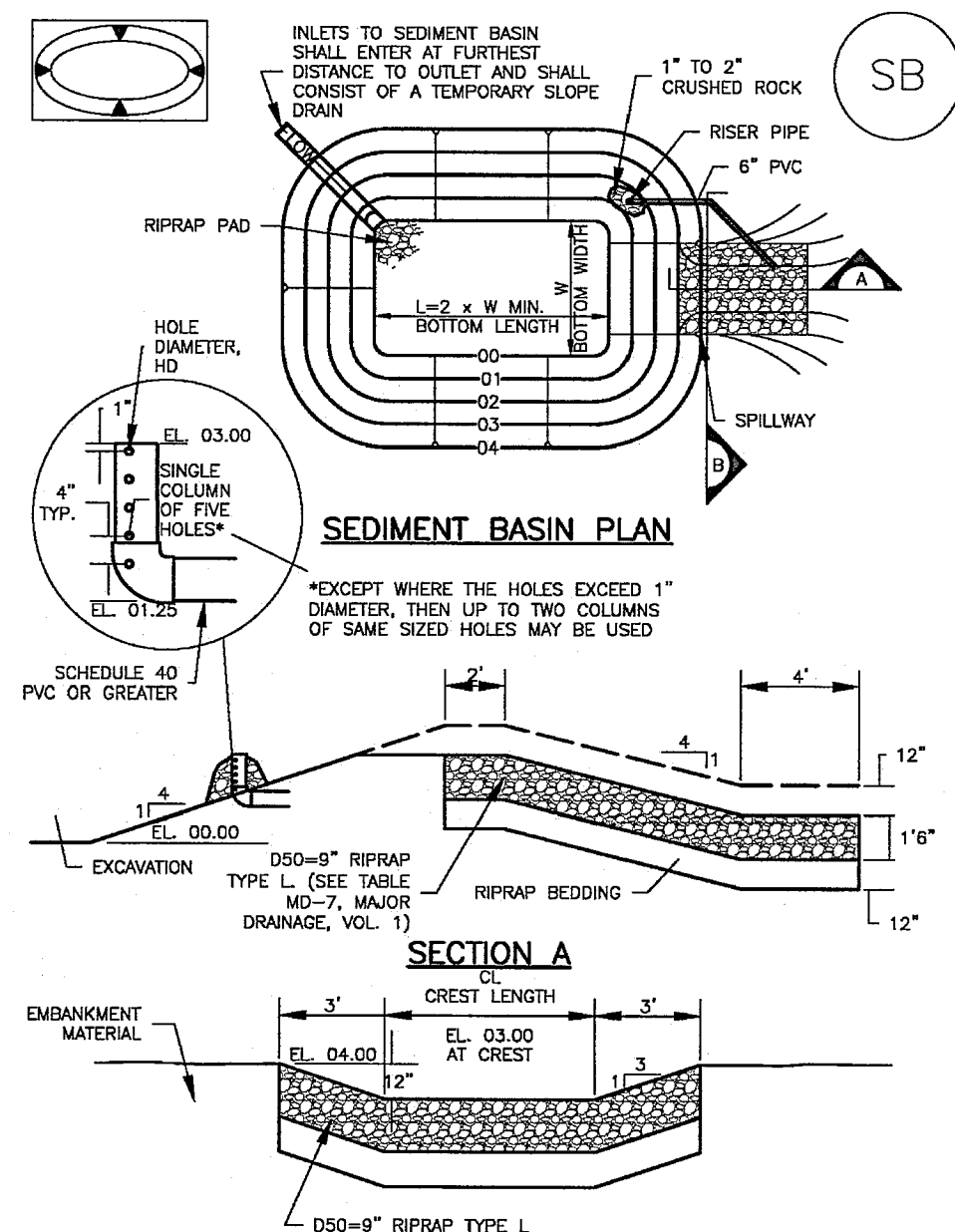


TEMPORARY SEDIMENT BASIN DESIGN DATA			
BASIN	DRAINAGE AREA (AC)	CL (FT)	HD (IN)
M4	3.2	5	1-1/2"
M5	23.2	22	1-3/16"



Sediment Basin (SB)

SC-7



August 2013

Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3

SB-5

SC-7

Sediment Basin (SB)

TABLE SB-1. SIZING INFORMATION FOR STANDARD SEDIMENT BASIN			
Upstream Drainage Area (rounded to nearest acre), (ac)	Basin Bottom Width (W), (ft)	Basin Crest Length (CL), (ft)	Flow Diameter (D), (in)
1	12 1/2	2	1 1/4
2	21	3	1 1/2
3	28	4	1 3/4
4	33 1/2	5	1 3/4
5	39 1/2	6	1 3/4
6	47 1/2	7	1 3/4
7	55 1/2	8	1 3/4
8	63 1/2	9	1 3/4
9	71 1/2	10	1 3/4
10	79 1/2	11	1 3/4
11	87 1/2	12	1 3/4
12	95 1/2	13	1 3/4
13	103 1/2	14	1 3/4
14	111 1/2	15	1 3/4
15	119 1/2	16	1 3/4

SEDIMENT BASIN INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
- LOCATION OF SEDIMENT BASIN.
- TYPE OF BASIN (STANDARD BASIN OR NONSTANDARD BASIN).
- FOR STANDARD BASIN, BOTTOM WIDTH, N. CREST LENGTH, CL, AND HOLE DIAMETER, HD.
- FOR NONSTANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT H, NUMBER OF COLLARS N, HOLE DIAMETER HD AND PIPE DIAMETER D.
2. FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
3. SEDIMENT BASINS SHALL BE INSTALLED PRIOR TO ANY OTHER LAND-DISTURBING ACTIVITY THAT RELIES ON ON BASINS AS A STORMWATER CONTROL.
4. EMBANKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF ODORS, ORGANIC MATERIAL, AND ROCKS OR CONCRETE GREATER THAN 3 ROCKS AND SHALL HAVE A MINIMUM OF 15 PERCENT BY WEIGHT PASSING THE NO. 200 SIEVE.
5. EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
6. PIPE SCH 40 OR GREATER SHALL BE USED.
7. THE DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SEDIMENT BASIN(S) FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASIN(S) THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS LARGER THAN 15 ACRES.

SB-6

Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3

August 2013

Sediment Basin (SB)

SC-7

SEDIMENT BASIN MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROMPTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 2. PRELUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 4. SEDIMENT ACCUMULATED IN BASIN SHALL BE REMOVED AS NEEDED TO MAINTAIN BMP EFFECTIVENESS, TYPICALLY WHEN SEDIMENT DEPTH REACHES ONE FOOT (I.E. TWO FEET BELOW THE SPILLWAY CREST).
 5. SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS ACCEPTED BY THE LOCAL JURISDICTION.
 6. WHEN SEDIMENT BASINS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDING AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.
- (DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO)
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM LISTED STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

August 2013

Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3

SB-7



JPS
ENGINEERING

19 E. Willamette Ave.
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80903

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CRP ARCHITECTS AIA
100 E. St. Vrain, Suite 300
Colorado Springs, Colorado 80903

TEMPORARY WATER
QUALITY POND DETAILS

SCALE : AS SHOWN



DATE: 4/17/19
DRAWN BY: BJJ
CHECKED BY: JPS
REVISED: 7/09/19

NO.	REVISION	BY	DATE
1	FOR PERMIT	JPS	4/17/19
2	COUNTY COMMENTS	JPS	4/29/19
3	COUNTY COMMENTS	JPS	6/20/19
4	COUNTY COMMENTS	JPS	7/09/19

PCD PROJECT NO. PPR-19-009

C3.3

STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS:

REVISED 7/02/19

1. STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
2. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
3. A SEPARATE STORMWATER MANAGEMENT PLAN (SWMP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
4. ONCE THE ESQCP IS APPROVED AND A "NOTICE TO PROCEED" HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STATE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.
5. CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER. CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
6. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES ARE NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER MANAGEMENT PLAN.
7. TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS.
8. FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLANT DENSITY OF 70 PERCENT OF PRE-DISTURBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.
9. ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT AFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
10. EARTH DISTURBANCES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY MINIMIZE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME. PRE-EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED WITHIN 50 HORIZONTAL FEET OF A WATERS OF THE STATE UNLESS SHOWN TO BE INFEASIBLE AND SPECIFICALLY REQUESTED AND APPROVED.
11. COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OR WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED. IF COMPACTION PREVENTION IS NOT FEASIBLE DUE TO SITE CONSTRAINTS, ALL AREAS DESIGNATED FOR INFILTRATION AND VEGETATION CONTROL MEASURES MUST BE LOOSENEED PRIOR TO INSTALLATION OF THE CONTROL MEASURE(S).
12. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF SITE.
13. CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO ENTER STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUTS SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY, CREEK OR STREAM.
14. DURING DEWATERING OPERATIONS OF UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.
15. EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
17. WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. CONTROL MEASURES MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
18. TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
19. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, SOIL, AND SAND THAT MAY ACCUMULATE IN ROADS, STORM DRAINS AND OTHER DRAINAGE CONVEYANCE SYSTEMS AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
20. THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.
21. NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ONSITE UNLESS PERMISSION FOR THE USE OF SUCH CHEMICAL(S) IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S), SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
22. BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ONSITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.
23. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
24. OWNER/DEVELOPER AND THEIR AGENTS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE, DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (1041, NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND OTHER LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, LOCAL, OR COUNTY AGENCIES, THE MOST RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
25. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
26. PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
27. A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND SHALL BE UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
28. THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY KUMAR & ASSOC., DATED 2/25/19 AND SHALL BE CONSIDERED A PART OF THESE PLANS.
29. AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB ONE (1) ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL DIVISION
WOOD - PERMITS
4300 CHERRY CREEK DRIVE SOUTH
DENVER, CO 80246-1530
ATTN: PERMITS UNIT

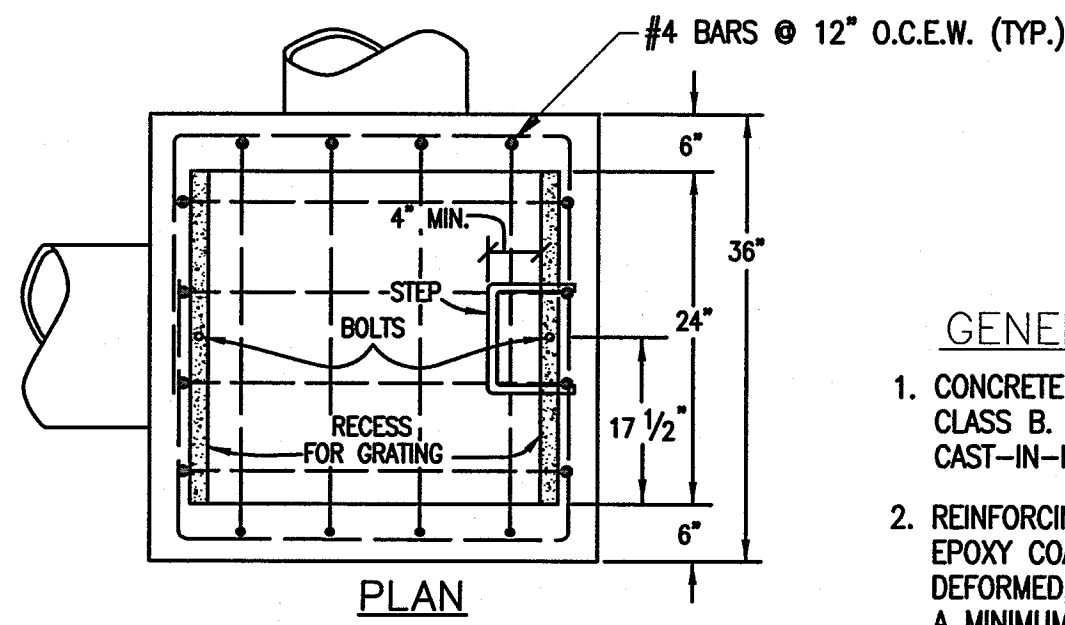
EXISTING VEGETATION:

NATIVE GRASSES (APPROXIMATELY 70 PERCENT COVERAGE)

SEEDING MIX:		
GRASS	VARIETY	AMOUNT IN PLS LBS. PER ACRE
CRESTED WHEAT GRASS	EPHRAIM OR HYCREST	4.0 LBS.
PERENNIAL RYE	LINN	2.0 LBS.
WESTERN WHEATGRASS	SARTON	3.0 LBS.
SMOOTH BROME GRASS	LINCOLN OR MANCHAR	5.0 LBS.
SIDEOTS GRAMA	EPHRAIM	2.5 LBS.
TOTAL:		16.5 LBS.

SEEDING & FERTILIZER APPLICATION: DRILL SEED OR HYDRO-SEED PER CDOT SPEC. SECTION 212.

MULCHING APPLICATION: CONFORM TO CDOT SPEC-SECTION 213.



GENERAL NOTES

- CONCRETE SHALL BE CDOT CLASS B. INLET MAY BE CAST-IN-PLACE OR PRECAST.
- REINFORCING BARS SHALL BE EPOXY COATED AND DEFORMED, AND SHALL HAVE A MINIMUM 2 IN. CLEARANCE.
- STRUCTURAL STEEL FOR GRATES AND GRATE INSTALLATION HARDWARE SHALL BE GALVANIZED AND SHALL BE IN ACCORDANCE WITH CDOT 712.06.
- STEPS SHALL BE PROVIDED WHEN INLET DIMENSION "H" EXCEEDS 3 FT.-6 IN. AND SHALL BE IN ACCORDANCE WITH AASHTO M 199.
- SEE CDOT SHEET M-604-11, INLET, TYPE D, FOR REINFORCEMENT AROUND THE PIPE OPENING.

NOTES:

- WHERE LOT LINES, WALLS, SLOPES OR OTHER PHYSICAL BARRIERS PROHIBIT 6" OF FALL WITHIN 10' DRAINS OR SWALES SHALL BE PROVIDED TO ENSURE DRAINAGE AWAY FROM THE STRUCTURE.
- MAINTAIN POSITIVE SLOPE AWAY FROM BLDG. ON ALL SIDES. MIN. SLOPE 6" IN FIRST 10' IN UNPAVED AREAS, MIN. SLOPE OF 3" IN THE FIRST 10' IN PAVED AREAS. AFTER INITIAL 10' SLOPE AWAY FROM BLDG. MIN 1% MAX. 5% SLOPE.

TYPICAL BUILDING DRAINAGE DETAIL (B)

SCALE: NTS

SEDIMENT CONTROL MAINTENANCE PROGRAM:

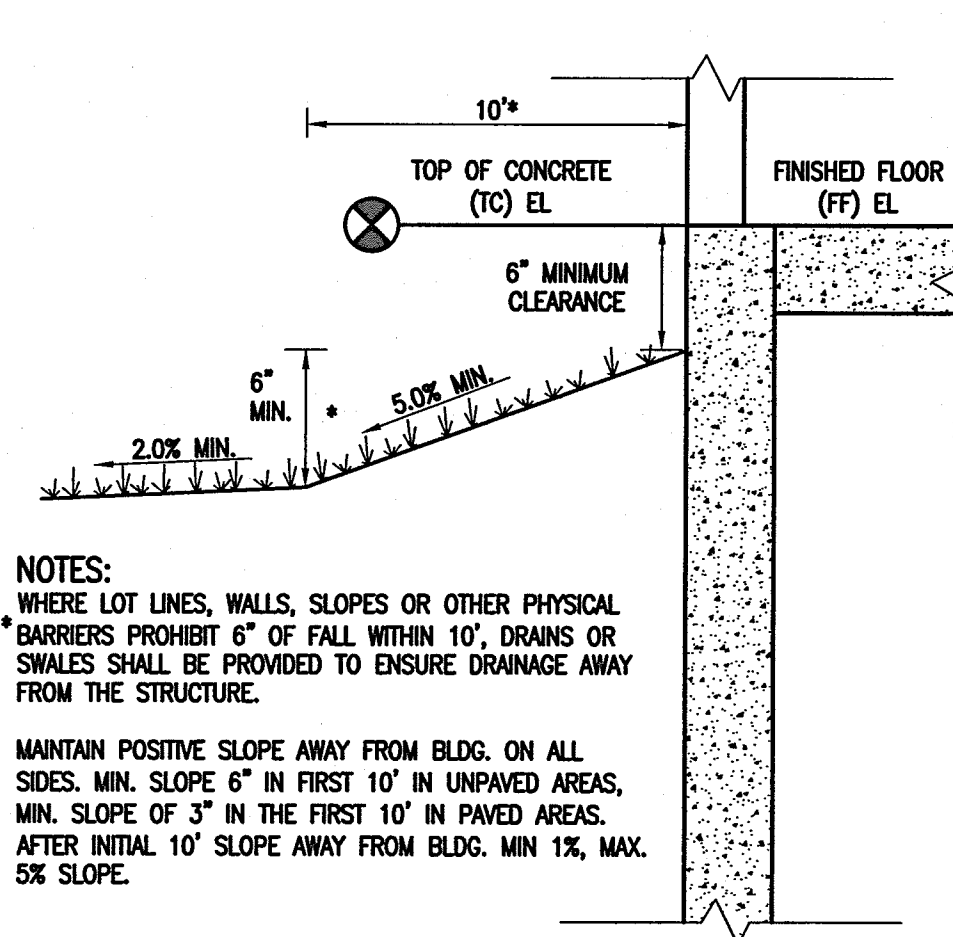
FREQUENCY	
BI-WEEKLY	PERIODIC SITE INSPECTIONS
MONTHLY	RE-VEGETATION OF EXPOSED SOILS
AFTER STABILIZATION ACHIEVED	SEDIMENT REMOVAL FROM BMP'S
	REMOVAL OF BMP'S

- AND AFTER ANY PRECIPITATION OR SNOW MELT EVENT THAT CAUSES SURFACE EROSION.
- ACCUMULATED SEDIMENT AND DEBRIS SHALL BE REMOVED WHEN THE SEDIMENT LEVEL REACHES ONE HALF THE HEIGHT OF THE BMP OR AT ANY TIME THAT SEDIMENT OR DEBRIS ADVERSELY IMPACTS THE FUNCTION OF THE BMP.

ESTIMATED TIME SCHEDULE:

AUGUST, 2019	INSTALL BMP'S
AUGUST, 2019	SITE GRADING
APRIL, 2020	SEEDING & MULCHING
SEPTEMBER, 2021	STABILIZATION

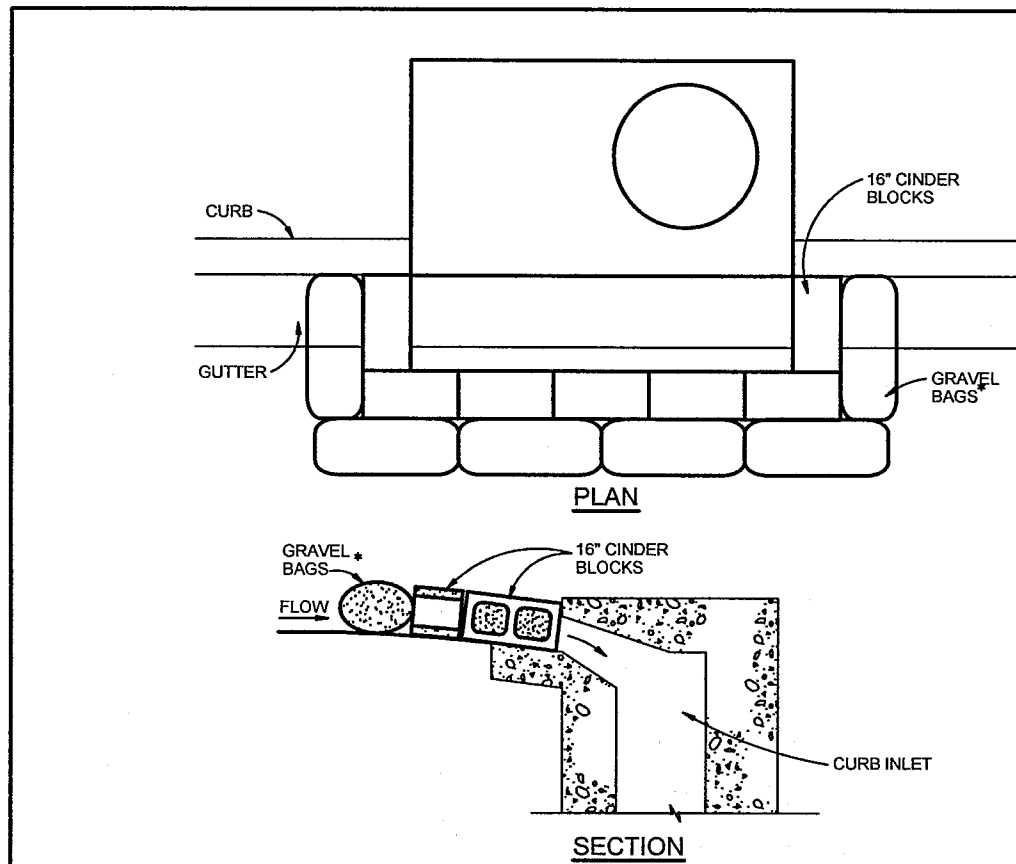
RECEIVING WATERS: WEST CHERRY CREEK



NOTE: TYPICAL RIPRAP APRON DIMENSIONS SHALL BE 12'x4'x2' D.O' UNLESS NOTED OTHERWISE

TYPICAL RIPRAP APRON/
CULVERT OUTLET PAVING (C)

NOT TO SCALE



BLOCK AND GRAVEL BAG CURB INLET PROTECTION

BLOCK AND GRAVEL BAG CURB INLET PROTECTION NOTES

- INSTALLATION REQUIREMENTS**
- INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY AFTER CONSTRUCTION OF INLET.
 - CONCRETE BLOCKS ARE TO BE Laid AROUND THE INLET IN A SINGLE ROW ON THEIR SIDES, BUTTING ONE ANOTHER WITH THE OPEN ENDS OF THE BLOCK FACING OUTWARD.
 - GRAVEL BAGS ARE TO BE PLACED AROUND THE CONCRETE BLOCKS (ONLY FACING ONE).
 - GRAVEL BAGS ARE TO CONTAIN WASHED SAND OR GRAVEL, APPROXIMATELY 3/4 INCH IN DIAMETER.
 - BAGS ARE TO BE MADE OF 1/4" INCH WIRE MESH (USED WITH GRAVEL ONLY) OR GEOTEXTILE.
 - AN ALTERNATE 3/4" TO 1/2" COARSE FILTER OVER A WIRE SCREEN MAY BE USED IN PLACE OF GRAVEL BAGS. THE WIRE MESH SHALL EXTEND ABOVE THE TOP OF THE CONCRETE BLOCKS AND THE GRAVEL PLACED OVER THE WIRE SCREEN TO THE TOP OF THE CONCRETE BLOCKS.
- MAINTENANCE REQUIREMENTS**
- CONTRACTOR SHALL INSPECT INLET PROTECTION IMMEDIATELY AFTER EACH RAINFALL. AT LEAST DAILY DURING PROLONGED RAINFALL AND WEEKLY DURING PERIODS OF NO RAINFALL.
 - DAMAGED OR INEFFECTIVE INLET PROTECTION SHALL PROMPTLY BE REPAIRED OR REPLACED.
 - SEDIMENT SHALL BE REMOVED WHEN SEDIMENT HAS ACCUMULATED TO APPROXIMATELY 1/2 THE DESIGN CULVERT HEIGHT.
 - INLET PROTECTION SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED WITHIN THE DRAINAGE AREA AS APPROVED BY THE CITY.

City of Colorado Springs Stormwater Quality	Figure IP-3 Block & Gravel Bag Curb Inlet Protection Construction Detail and Maintenance Requirements
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Table MD-7--Classification and Gradation of Ordinary Riprap				
Riprap Designation	% Smaller Than Given Size by Weight	Intermediate Rock Dimensions (inches)	d_{50} (inches)*	
Type VL	70-100	12		
	50-70	9		
	35-50	6	6"	
Type L	70-100	16		
	50-70	12		
	35-50	9	9"	
Type M	70-100	21		
	50-70	18		
	35-50	12	12"	
Type H	70-100	30		
	50-70	24		
	35-50	18	18	
Type VH	70-100	42		
	50-70	33		
	35-50	24	24	

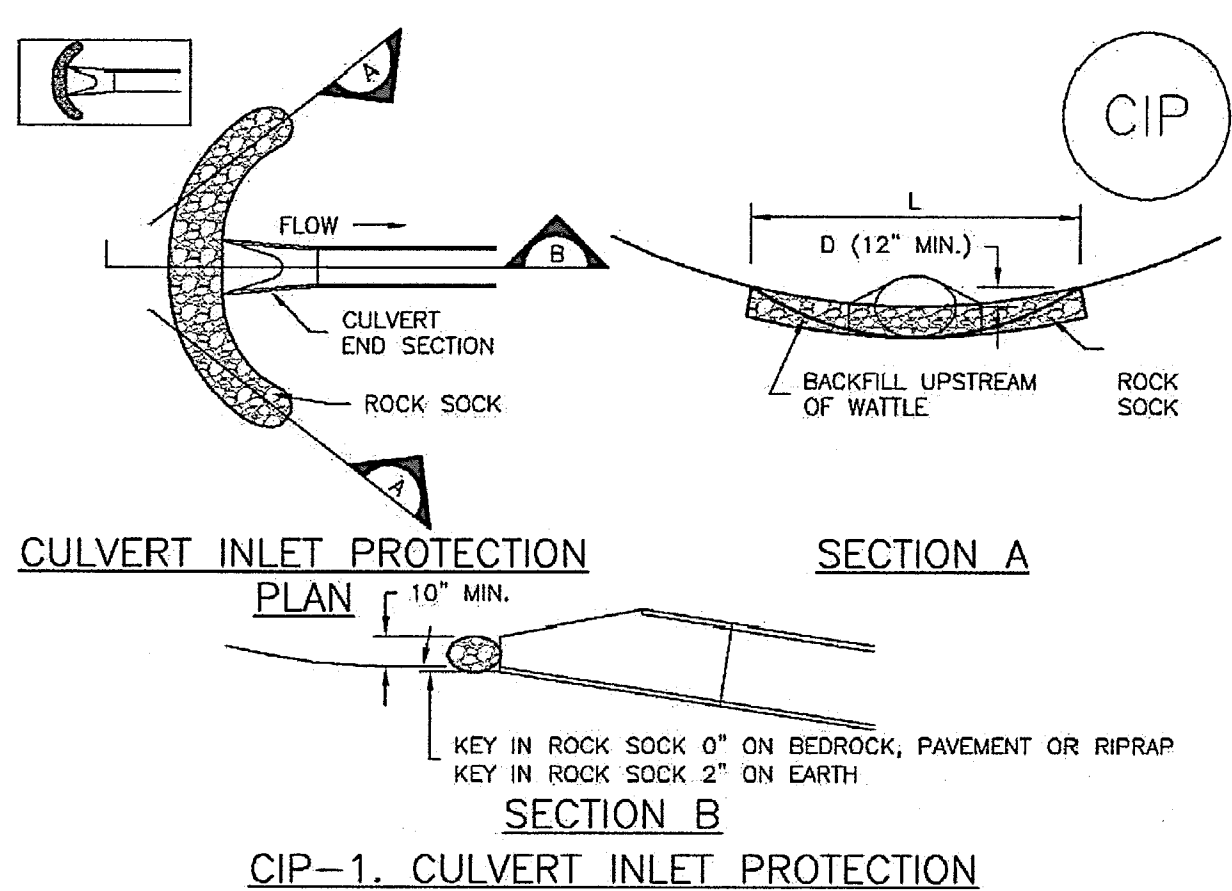
* d_{50} = mean particle size (intermediate dimension) by weight.
** Mix VL, L, and M riprap with 35% topsoil (by volume) and bury it with 4 to 6 inches of topsoil, all vibration compacted, and revegetate.

Basic requirements for riprap stone are as follows:

- Rock shall be hard, durable, angular in shape, and free from cracks, overburden, shale, and organic matter.
- Neither breadth nor thickness of a single stone should be less than one-third its length, and rounded stone should be avoided.
- The rock should sustain a loss of not more than 40% after 500 revolutions in an abrasion test (Los Angeles machine--ASTM C-535-69) and should sustain a loss of not more than 10% after 12 cycles of freezing and thawing (AASHTO test 103 for ledge rock procedure A).
- Rock having a minimum specific gravity of 2.65 is preferred; however, in no case should rock have a specific gravity less than 2.50.

Inlet Protection (IP)

SC-6



CIP-1. CULVERT INLET PROTECTION

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SECTION C

SECTION D

SECTION E

SECTION F

SECTION G

SECTION H

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SECTION L

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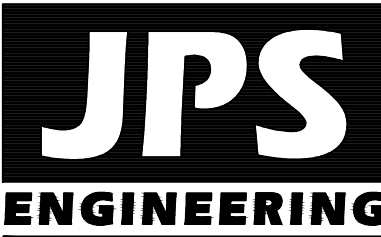
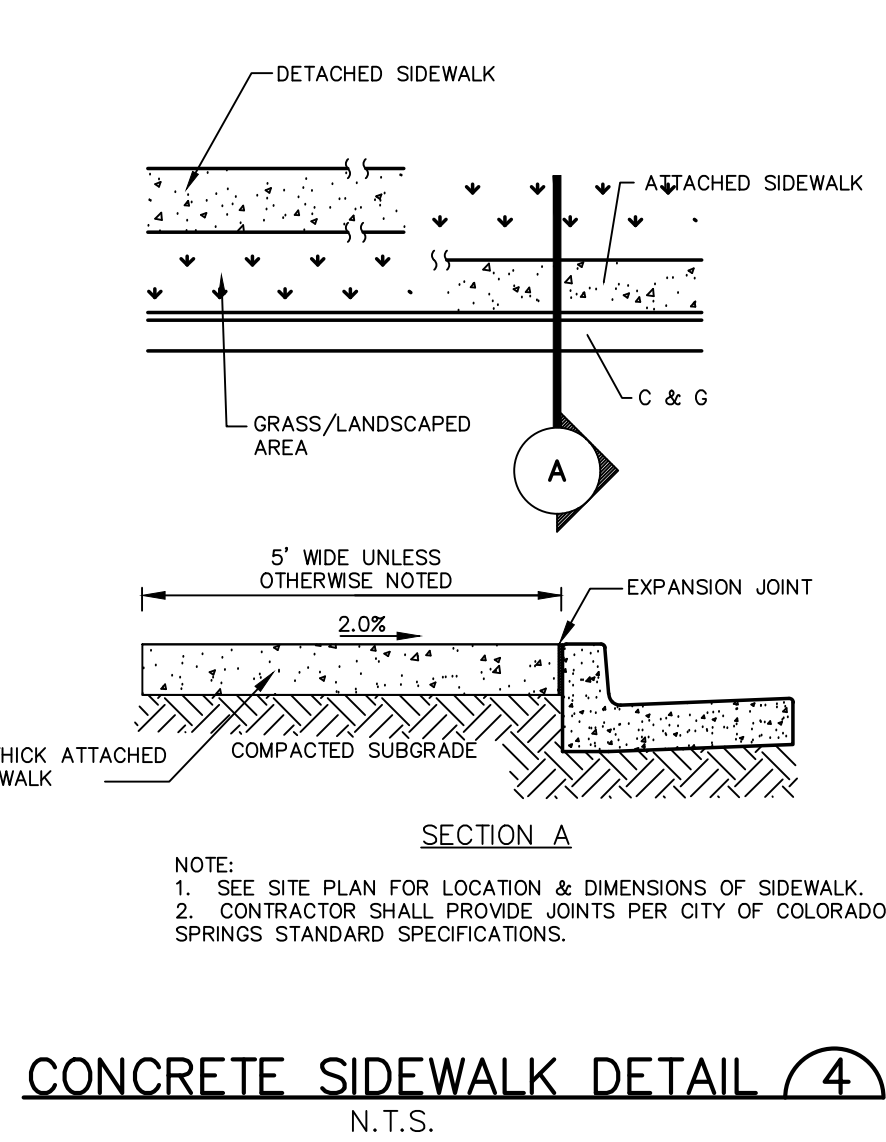
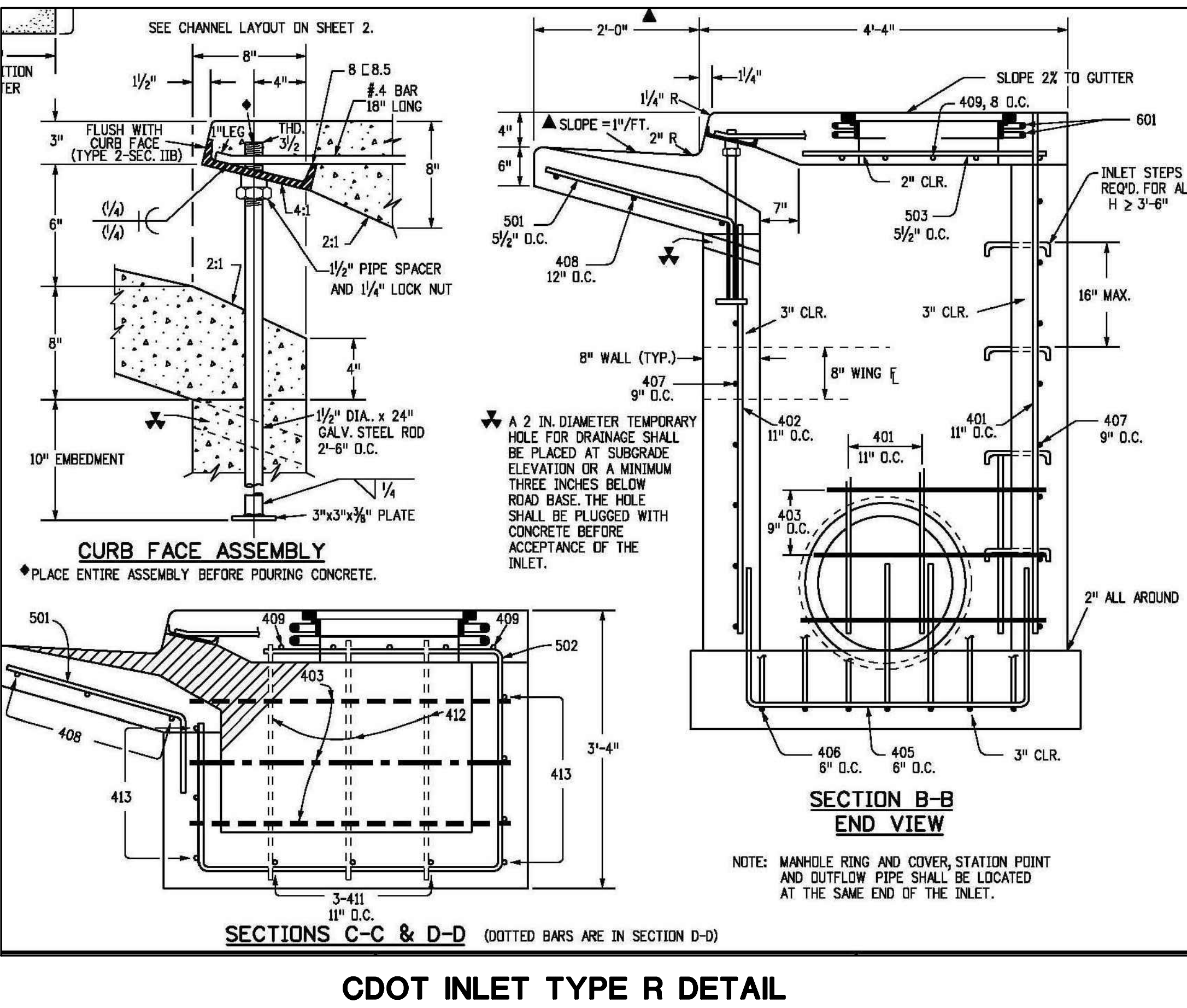
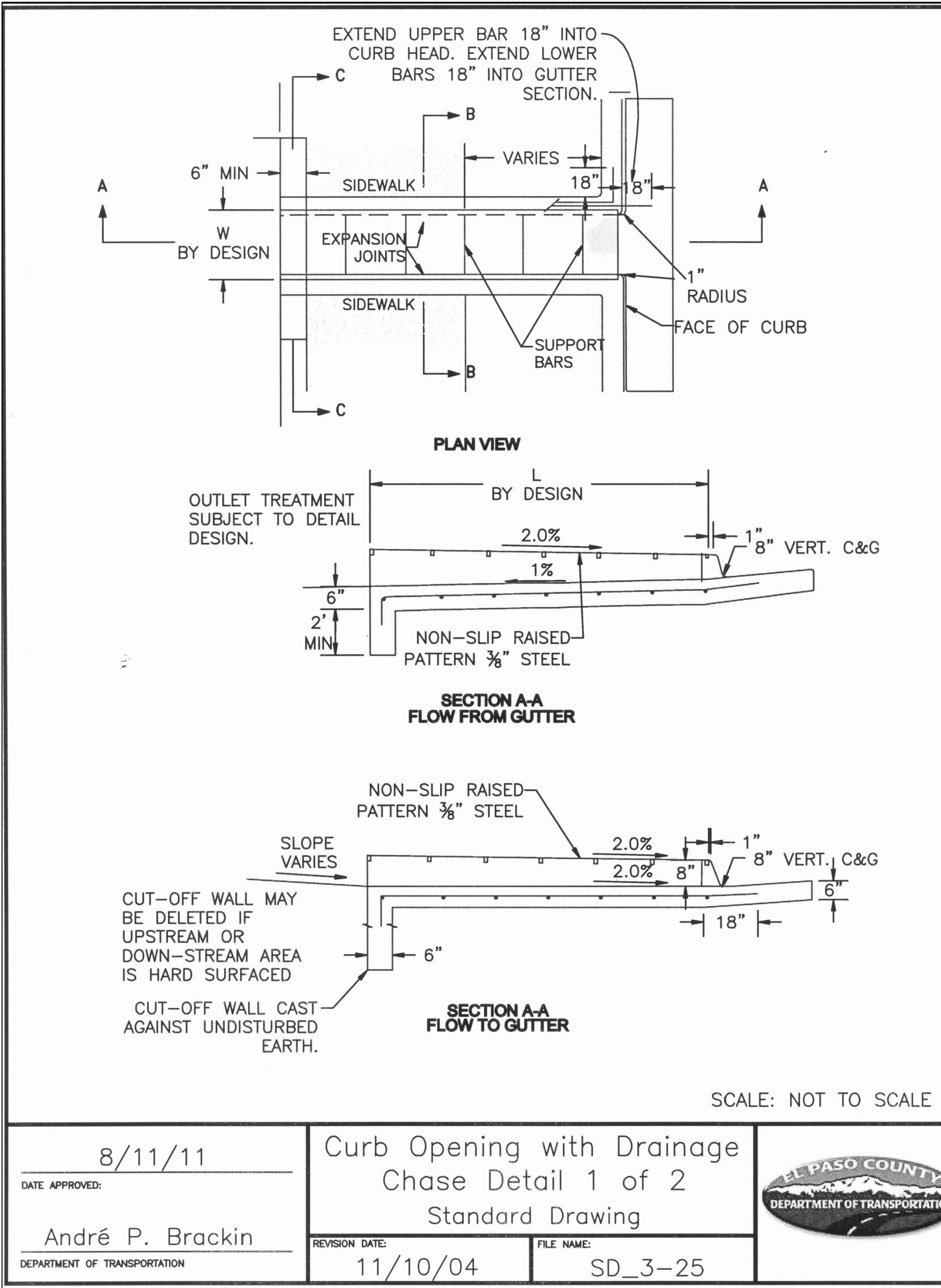
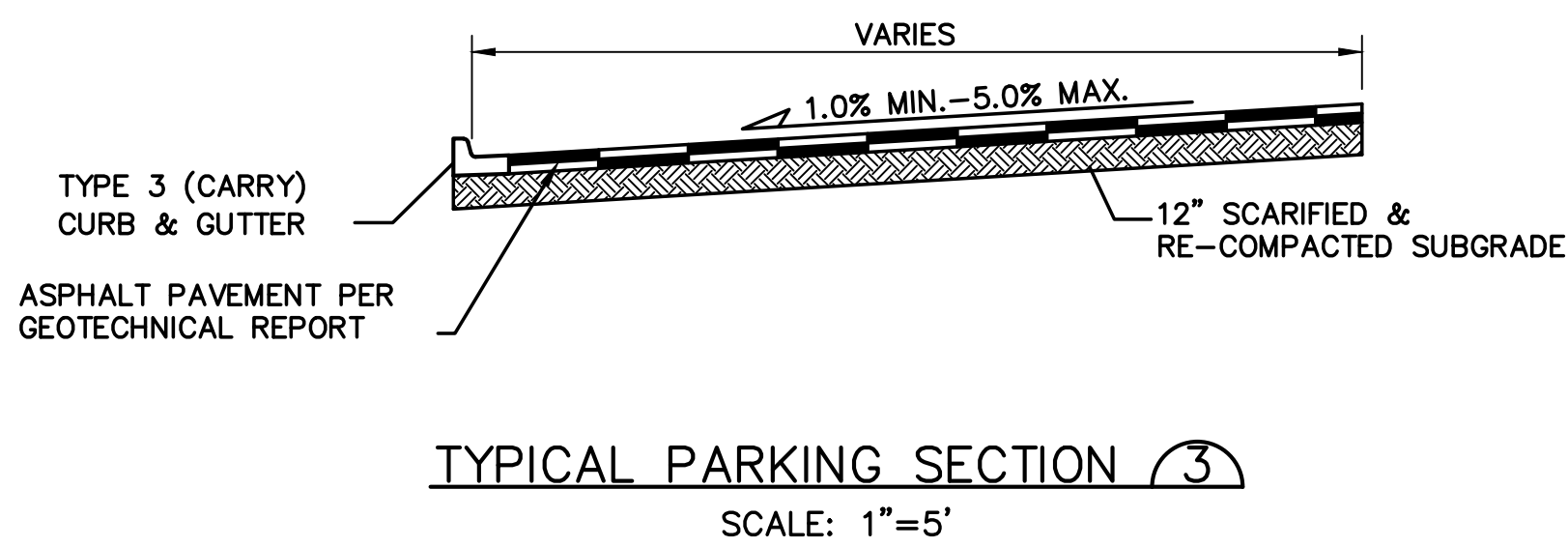
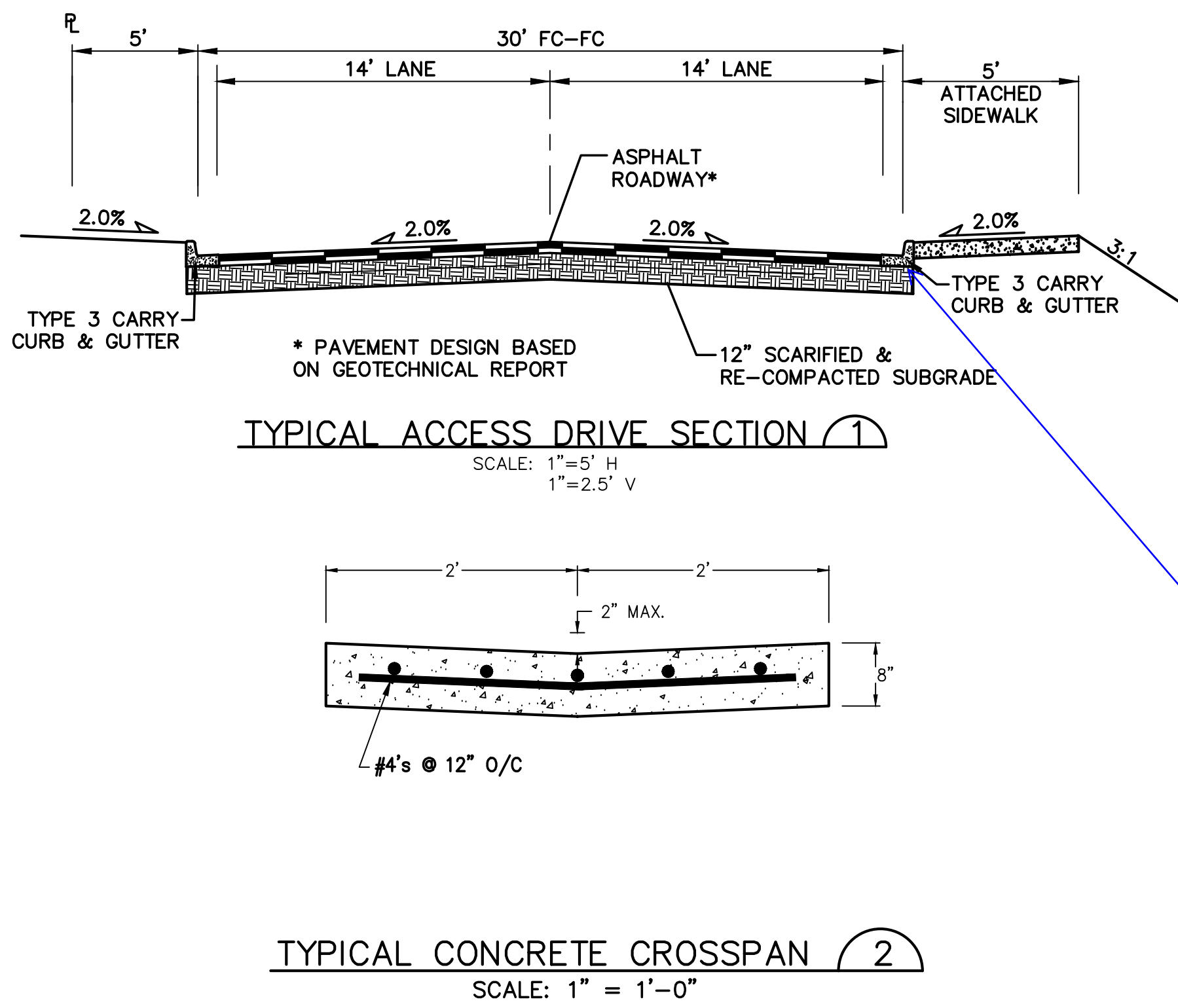
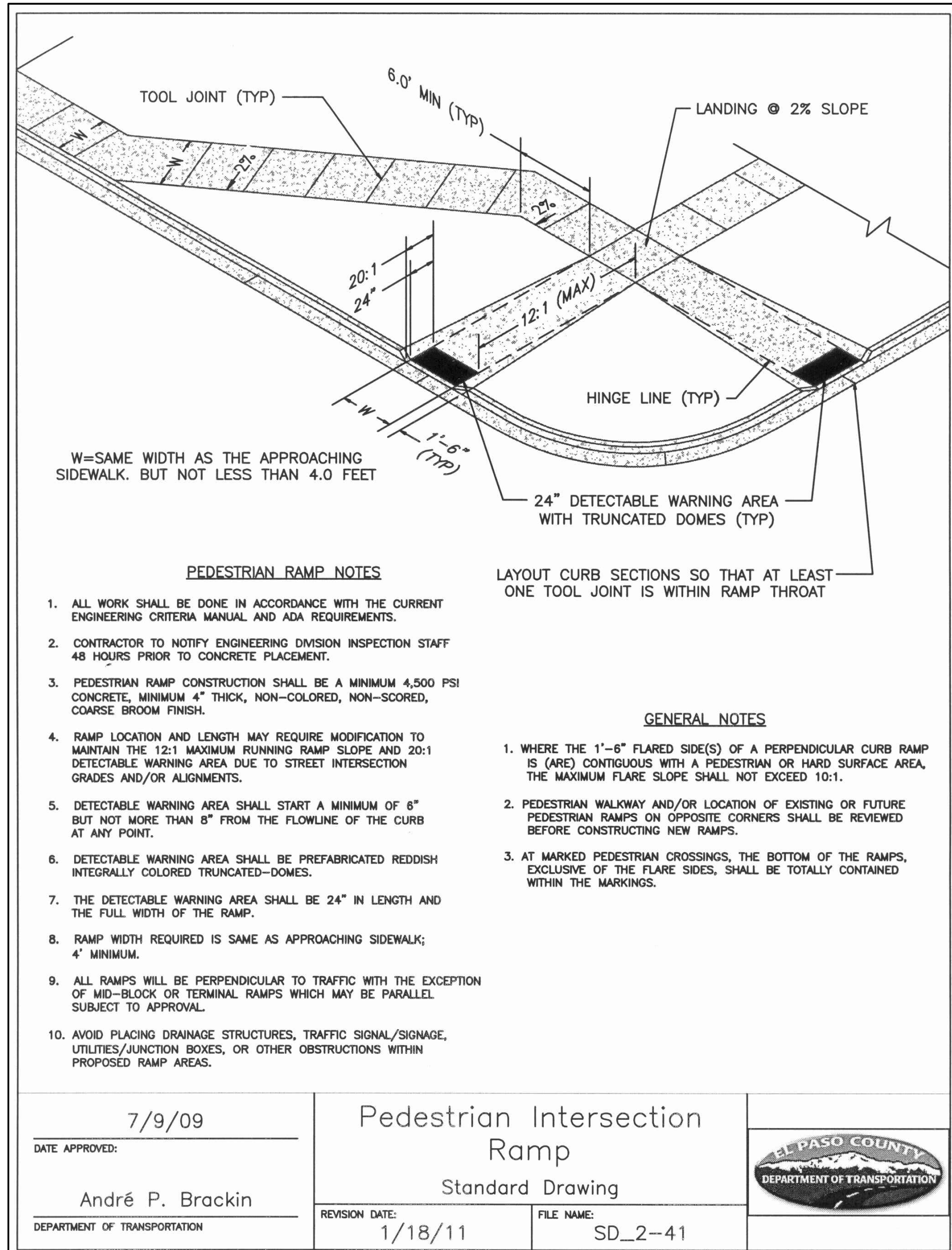
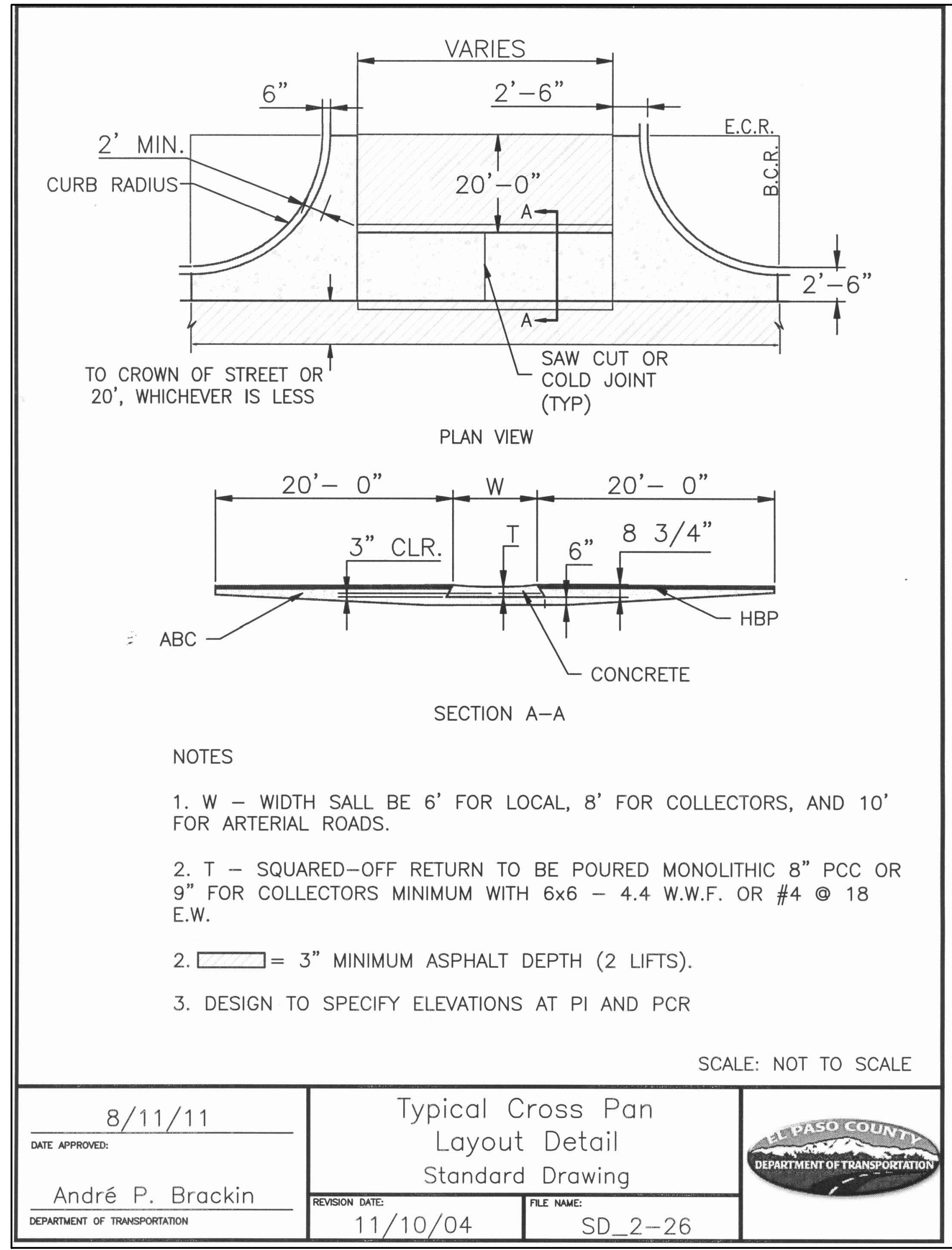
SECTION EL

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SECTION EN

MONUMENT
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CIVIL DETAILS - PHASE 1b



DATE: 12/21/18
DRAWN BY: BJJ
CHECKED BY: JPS
REVISED: 8/09/19

NO.	REVISION	BY	DATE
1	FOR PERMIT	JPS	4/01/19
2	COUNTY COMMENTS	JPS	4/29/19
3	COUNTY COMMENTS	JPS	6/20/19
4	COUNTY COMMENTS	JPS	7/09/19
5	COUNTY COMMENTS	JPS	8/09/19

PCD PROJECT NO. PPR-19-009

C4.2