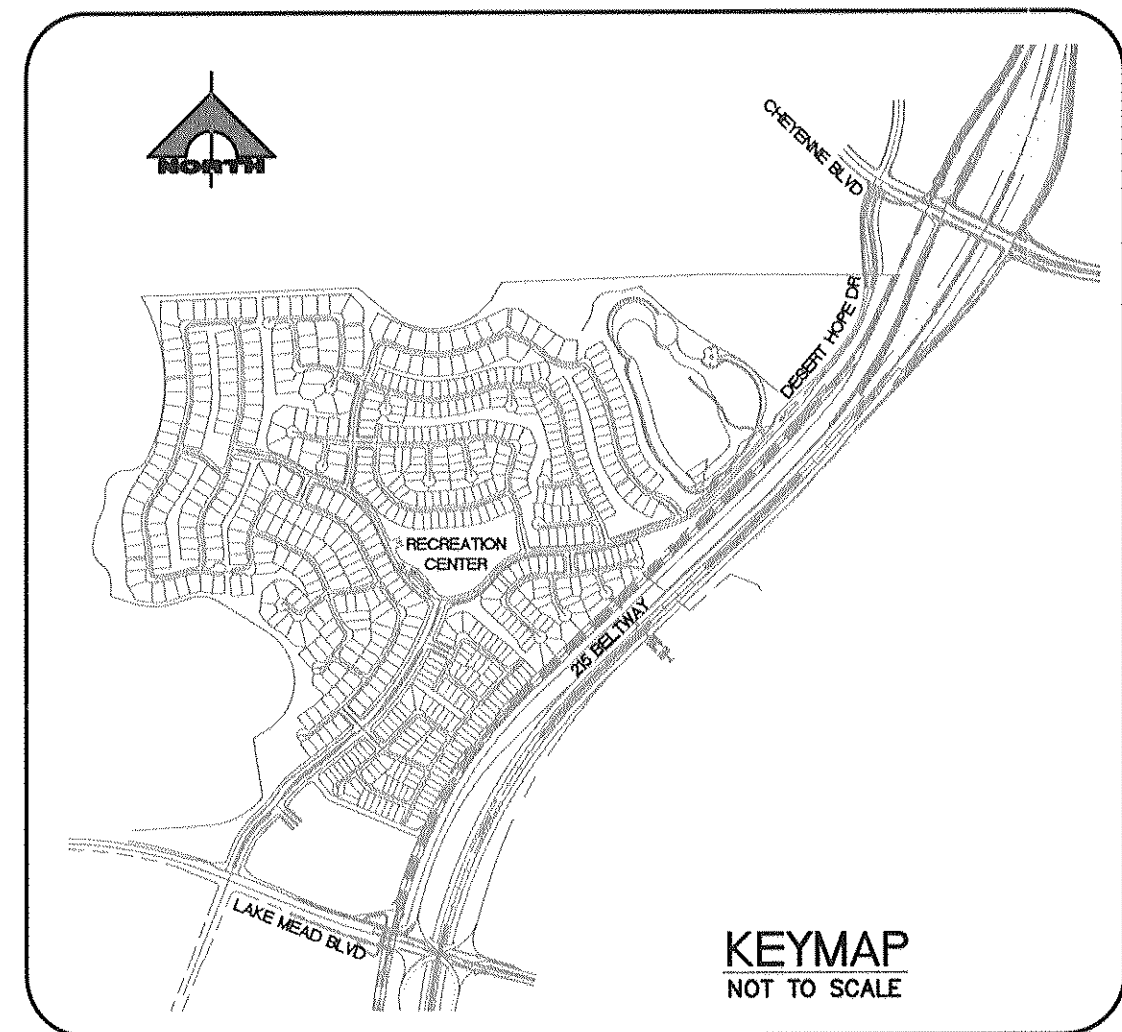
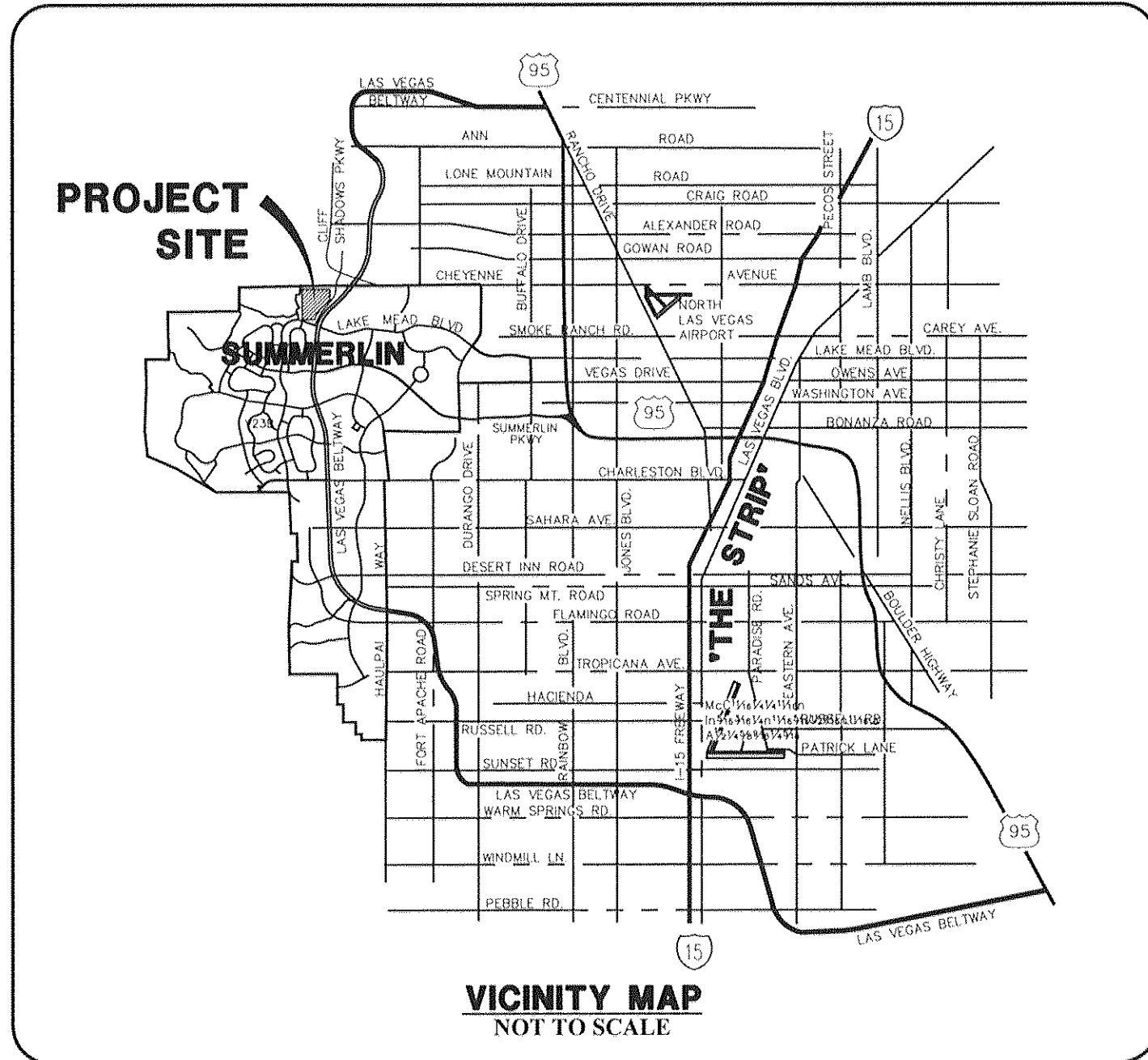


NO.	DWG	DESCRIPTION
1	C1	COVER SHEET
2	C2	GENERAL NOTES AND LEGEND
3	C3	QUANTITIES/MANHOLE SCHEDULE
4	IG	INTERIM CHANNEL GRADING
5	G1	GRADING PLAN I
6	G2	GRADING PLAN II
7	G3	GRADING PLAN III
8	G4	GRADING PLAN IV
9	G5	GRADING PLAN V
10	G6	GRADING PLAN VI
11	G7	GRADING PLAN VII
12	G8	GRADING PLAN VIII
13	G9	GRADING PLAN IX
14	G10	GRADING PLAN X
15	G11	GRADING PLAN XI
16	G12	GRADING PLAN XII
17	G13	GRADING PLAN XIII
18	G14	GRADING PLAN XIV
19	P1	STORM CHANNEL PLAN AND PROFILE -- STA 13+50 TO STA 19+00
		8'X5' ROB PLAN AND PROFILE
20	P2	RECTANGULAR CHANNEL PLAN AND PROFILE -- STA 19+00 TO STA 25+00
21	P3	RECTANGULAR CHANNEL PLAN AND PROFILE -- STA 25+00 TO STA 31+00
22	P4	RECTANGULAR CHANNEL PLAN AND PROFILE -- STA 31+00 TO STA 37+00
23	P5	RECTANGULAR CHANNEL PLAN AND PROFILE -- STA 37+00 TO STA 44+00
24	P6	RECTANGULAR CHANNEL PLAN AND PROFILE -- STA 44+00 TO STA 49+81.21
25	P7	STORM DRAIN PLAN AND PROFILE -- STA 8+00 TO STA 14+00
26	P8	STORM DRAIN PLAN AND PROFILE -- STA 14+00 TO STA 19+00
27	P9	STORM DRAIN PLAN AND PROFILE -- STA 19+00 TO STA 23+00
28	P10	STORM DRAIN PLAN AND PROFILE -- STA 23+00 TO STA 28+00
29	P11	STORM DRAIN PLAN AND PROFILE -- STA 28+00 TO STA 33+50
30	P12	STORM DRAIN PLAN AND PROFILE -- STA 33+50 TO STA 39+00
31	P13	STORM DRAIN PLAN AND PROFILE -- STA 39+00 TO STA 45+00
32	P14	STORM DRAIN PLAN AND PROFILE -- STA 45+00 TO STA 49+50
33	P15	STORM DRAIN PLAN AND PROFILE -- STA 49+50 TO STA 54+00
34	P16	48" RCP LATERAL PLAN AND PROFILE -- STA 18+50.20
		42" RCP LATERAL PLAN AND PROFILE -- STA 33+85.00
35	P17	36" RCP LATERAL PLAN AND PROFILE -- STA 44+49.18
		36" RCP LATERAL PLAN AND PROFILE -- STA 49+92.04
36	P18	36" NUISANCE STORM DRAIN PLAN AND PROFILE
		36" NUISANCE STORM DRAIN PLAN AND PROFILE
37	P19	DETENTION BASIN STORM DRAIN 1 PLAN AND PROFILE -- BEGIN TO STA 4+00
38	P20	DETENTION BASIN STORM DRAIN 1 PLAN AND PROFILE -- STA 4+00 TO END
39	P21	DETENTION BASIN STORM DRAIN 2 PLAN AND PROFILE
40	P22	DETENTION BASIN STORM DRAIN 3 PLAN AND PROFILE
41	MG1	MASS GRADING I
42	MG2	MASS GRADING II
43	MG3	MASS GRADING III
44	MG4	MASS GRADING IV
45	MG5	MASS GRADING V
46	MG6	MASS GRADING VI
47	MG7	MASS GRADING VII
48	MG8	MASS GRADING VIII
49	MG9	MASS GRADING IX
50	MG10	MASS GRADING X
51	MG11	MASS GRADING XI
52	MG12	MASS GRADING XII
53	MG13	MASS GRADING XIII
54	MG14	MASS GRADING XIV
55	MG15	MASS GRADING XV
56	MG16	MASS GRADING XVI
57	MG17	MASS GRADING XVII
58	MG18	MASS GRADING XVIII
59	DB	OVERALL DETENTION BASIN
60	D1	DETAIL SHEET I
61	D2	DETAIL SHEET II
62	D3	DETAIL SHEET III
63	D4	DETAIL SHEET IV
64	D5	DETAIL SHEET V
65	D6	DETAIL SHEET VI
66	D7	DETAIL SHEET VII
67	D8	STAGE/STORAGE BASIN PARAMETERS

APN #137-13-101-007	APN #137-13-101-008
APN #137-14-601-002	APN #137-14-501-004
APN #137-14-601-003	APN #137-13-101-009



NO.	DWG	DESCRIPTION
68	S1	GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS
69	S2	TYPICAL RECTANGULAR CHANNEL DETAILS
70	S3	TYPICAL RECTANGULAR CHANNEL SECTIONS
71	S4	RECTANGULAR CHANNEL WALL SECTIONS
72	S5	CHANNEL TRANSITION DETAILS
73	S6	CHANNEL TRANSITION DETAILS II
74	S7	TYPICAL RECTANGULAR CHANNEL ACCESS RAMP DETAILS
75	S8	RECTANGULAR CHANNEL TO TRAPEZOIDAL CHANNEL TRANSITION STRUCTURE
76	S9	(2)10'X14' RCB TO 10'X14 RCB TRANSITION STRUCTURE
77	S10	DEBRIS BASIN SPILLWAY
78	S11	DEBRIS BASIN SPILLWAY SECTION
79	S12	DEBRIS BASIN SPILLWAY
80	S13	DEBRIS BASIN RETAINING WALLS
81	S14	DETENTION BASIN SPILLWAY
82	S15	DETENTION BASIN SPILLWAY DETAILS
83	S16	TYPICAL RCB SECTIONS
84	S17	STILLING BASIN
85	S18	DEBRIS BASIN RETAINING WALLS
86	S19	RETAINING WALL PLAN AND DETAILS
87	S20	WATER QUALITY STANDPIPE AND OUTFALL

THAT PORTION OF SECTIONS 13 AND 14, TOWNSHIP 20, RANGE 59 EAST, M.D.B.& M., DESCRIBED AS FOLLOWS:

PARCEL 1 AS SHOWN BY MAP THEREOF ON FILE IN FILE 112 OF PARCEL MAPS, PAGE 94, IN THE OFFICE OF THE COUNTY RECORDERS OFFICE, CLARK COUNTY, NEVADA.

APN'S 137-13-101-008 AND 137-14-601-004

THAT PORTION OF SECTIONS 13 AND 14, TOWNSHIP 20, RANGE 59 EAST, M.D.B.& M., DESCRIBED AS FOLLOWS:

PARCEL 2 AS SHOWN BY MAP THEREOF ON FILE IN FILE 112 OF PARCEL MAPS, PAGE 94, IN THE OFFICE OF THE COUNTY RECORDERS OFFICE, CLARK COUNTY, NEVADA.

SOUTH 89°39'55" EAST, BEING THE BEARING OF THE NORTH LINE OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 13, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., AS SHOWN BY MAP THEREOF ON FILE IN FILE 91, PAGE 28 OF PARCEL MAPS IN THE CLARK COUNTY RECORDER'S OFFICE, CLARK COUNTY, NEVADA.

ELEV (NAVD 88) = 989.5990 METERS
3246.71 U.S. SURVEY FEET
SUMMERLIN WEST: CLV NAVD 88/93
ELEV = 989.5703 METERS
3246.62 U.S. SURVEY FEET



NV ENERGY

DATE

NEVADA POWER COMPANY ACKNOWLEDGES THAT WE HAVE RECEIVED YOUR PLANS AND WILL PROVIDE SERVICE TO ALL ELECTRICAL NEEDS ASSOCIATED WITH THIS PROJECT. NEVADA POWER COMPANY RESERVES THE RIGHT TO ADDRESS ANY EXISTING OR FUTURE CONFLICTS ONCE THE FINAL DESIGN IS COMPLETED. THE NEW SERVICE AND THE RESOLUTION OF ANY CONFLICTS WILL BE ACCOMPLISHED PURSUANT TO THE NEVADA PUBLIC UTILITY COMMISSION'S RULES AND REGULATIONS.

LAS VEGAS FIRE AND RESCUE, FIRE FLOW 1750 GPM AT 20 PSI RESIDUAL

ALLEN PAVELKA, PE# 9029 CITY ENGINEER CITY OF LAS VEGAS, NEVADA	DATE
---	------

APPROVAL OF THESE PLANS IS LIMITED TO THOSE IMPROVEMENTS CONSTRUCTED IN THE DEDICATED RIGHTS-OF-WAY AND/OR DEDICATED EASEMENTS. THIS APPROVAL DOES NOT AUTHORIZE THE CONSTRUCTION OF ANY IMPROVEMENTS THAT DEVIATE FROM ADOPTED STANDARDS AND/OR SPECIFICATIONS, EXCEPT THOSE SPECIFICALLY LISTED UNDER "DEVIATIONS FROM STANDARDS". THE ENGINEER SHALL RESOLVE ANY DEVIATION OTHER THAN THOSE LISTED IN "DEVIATIONS FROM STANDARDS" IN FAVOR OF THE UNIFORM STANDARD DRAWINGS AND SPECIFICATIONS CLARK COUNTY AREA NEVADA.

KEVIN ORROCK
VICE PRESIDENT

H# _____ CLV DWG# _____

PROJECT NO.
764-204-013

DESIGN: HN
DRAWN:
CHECK: WP
PLOT DATE: 03-17-16
PLOT TIME: 14:23:07

GC&V
ENGINEERS[®] SURVEYORS

1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
govenengineering.com

F: PROJECTS/V000784 - 204-G13/DWG/PRODUCTION/05 DRAINAGE/013/CEC1/ENW
HAO NGUYEN

PULTE HOMES
SUMMERLIN VILLAGE 26 - RESIDENTIAL
OFFSITE DRAINAGE IMPROVEMENTS
COVER SHEET

DRAWING
C1
1 OF 87 SHTS

GCV
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10801 W. CHARLESTON BLVD., 3RD FLOOR
LAS VEGAS, NV 89135
(702) 791-4300

1. IN THE EVENT THAT ANY UNFORESEEN CONDITIONS NOT COVERED BY THESE NOTES ARE ENCOUNTERED DURING GRADING OPERATIONS, THE OWNER/ENGINEER SHALL BE IMMEDIATELY NOTIFIED FOR DIRECTION.
2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ALL NECESSARY CUTS AND FILLS WITHIN THE LIMITS OF THIS PROJECT AND THE RELATED OFF-SITE WORK, SO AS TO GENERATE THE DESIRED SUBGRADE, FINISH GRADES AND SLOPES SHOWN.
3. CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ALL EXCAVATION. ADEQUATE SHIELDING SHALL BE DESIGNED AND PROVIDED BY THE CONTRACTOR TO PREVENT UNDERMINING OF ANY ADJACENT FEATURES OR FACILITIES AND/OR CAVING OF THE EXCAVATION.

4. THE CONTRACTOR IS WARNED THAT AN EARTHWORK BALANCE WAS NOT NECESSARILY THE INTENT OF THIS PROJECT. ANY ADDITIONAL MATERIAL REQUIRED OR LEFTOVER MATERIAL FOLLOWING EARTHWORK OPERATIONS BECOMES THE RESPONSIBILITY OF THE CONTRACTOR.
5. THE GRADING CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE OWNER TO PREPARE FOR THE REQUIREMENTS OF THE PROJECT STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND ASSOCIATED PERMIT.
6. CONTRACTOR SHALL GRADE TO THE LINES AND ELEVATIONS SHOWN ON THE PLANS WITHIN THE FOLLOWING HORIZONTAL AND VERTICAL TOLERANCES AND DEGREES OF COMPACTION, IN THE AREAS INDICATED:

	HORIZONTAL	VERTICAL	COMPACTION
A. PAVEMENT AREA SUBGRADE	0.1"±	+0.0' TO -0.1'	SEE SOILS REPORT
B. ENGINEERED FILL	0.5"±	+0.1' TO -0.1'	SEE SOILS REPORT
7. COMPACTION TESTING WILL BE PERFORMED BY THE OWNER OR HIS REPRESENTATIVE. COMPACTION SHALL COMPLY WITH THE REQUIREMENTS OF THE ENGINEER.
8. ALL CUT AND FILL SLOPES SHALL BE PROTECTED UNTIL EFFECTIVE EROSION CONTROL HAS BEEN ESTABLISHED.
9. THE USE OF POTABLE WATER WITHOUT A SPECIAL PERMIT FOR BUILDING OR CONSTRUCTION PURPOSES INCLUDING CONSOLIDATION OF BACKFILL OR DUST CONTROL IS PROHIBITED. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR CONSTRUCTION WATER.
10. THE CONTRACTOR SHALL MAINTAIN THE STREETS, SIDEWALKS AND ALL OTHER PUBLIC RIGHT-OF-WAY IN A CLEAN, SAFE AND USABLE CONDITION. ALL SPILLS OF SOIL, ROCK OR CONSTRUCTION DEBRIS SHALL BE IMMEDIATELY REMOVED FROM THE PUBLICLY OWNED PROPERTY DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT. ALL ADJACENT PROPERTY, PRIVATE OR PUBLIC SHALL BE MAINTAINED IN A CLEAN, SAFE AND USABLE CONDITION.
11. IN THE EVENT THAT ANY TEMPORARY CONSTRUCTION ITEM IS REQUIRED THAT IS NOT SHOWN ON THESE DRAWINGS, SUCH ITEM SHALL BE PROVIDED, AS DIRECTED BY THE ENGINEER, AT THE EXPENSE OF THE CITY OF LAS VEGAS. TEMPORARY CONSTRUCTION INCLUDES DITCHES, BERMS, ROAD SIGNS AND BARRICADES, ETC.

1. THE OWNER, SITE DEVELOPER, CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATE IN, THE PUBLIC RIGHTS OF WAYS OF THE CITY OF LAS VEGAS AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.

2. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SET FORTH IN THE THE NRECA AND THE LAS VEGAS VALLEY CONSTRUCTION SITE BEST MANAGEMENT PRACTICES MANUAL.
3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON ALL DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVRI000000, SECTION III.A.5.
4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS AND ALL BMPs WEEKLY, AND SHALL RECORD AND REPORT ANY EVIDENCE OF RAIN EVENT OF 1/4 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVRI000000, SECTION III.A.12.
5. ACCUMULATED SEDIMENT IN BMPs SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RIDGEOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LAS VEGAS FIRE AND RESCUE ADOPTED FIRE CODE ORDINANCE #6325 FOR HYDRANT SPECIFICATIONS AND HYDRANT INSTALLATION SPECIFICATIONS.

2. AUTHORIZED FIRE HYDRANTS ARE AS FOLLOWS:
 - A. KENNEDY – GUARDIAN MODELS KB1A AND KB1D
 - B. MUELLER – SUPER CENTURION 250 MODEL A-423
 - C. CLOW – MEDALLION MODEL F-2546LVD
 - D. U.S. PIPE – METROFLOW/M-03
3. A PERMIT IS REQUIRED FROM LAS VEGAS FIRE AND RESCUE FOR THE INSTALLATION OF ON-SITE WATER LINES AND FIRE HYDRANTS. THE PERMIT AND CONTRACTORS MATERIAL TIME AND MATERIALS FOR THE UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER BEFORE COMMENCEMENT OF WORK. [CFC §105.7.12]
4. ON ANY RESIDENTIAL OR COMMERCIAL INSTALLATIONS, FIRE HYDRANTS SHALL BE INSTALLED AND FIRE APPLIANCE ACCESS ROADS SHALL BE MAINTAINED BEFORE COMMENCEMENT OF ANY COMBUSTIBLE CONSTRUCTION. ALL FIRE HYDRANTS SHALL BE IN GOOD WORKING ORDER AND SHALL BE CAPABLE OF DELIVERING THE REQUIRED FIRE FLOW. [CFC §331.0, §331.2]
5. TO IDENTIFY THE FIRE HYDRANT LOCATIONS, THE CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT THE CENTER LINE OF THE STREET ADJACENT TO THE FIRE HYDRANTS. [CFC §507.7.5.3]
6. ALL UNDERGROUND INSPECTIONS, PRESSURE AND FLUSH VERIFICATIONS OF ALL FIRE HYDRANTS AND FIRE LINES, SHALL BE CONDUCTED BEFORE COVERING THE LINES. CENTERING AND ACCESSIBLE FOR THE HYDRO TESTS WITH PRIOR FIRE PREVENTION APPROVAL. [CFC §106.3]
7. ALL ON-SITE UNDERGROUND WATER MAINS AND MATERIALS SHALL BE U.L. LISTED, A.W.W.A. APPROVED AND SHALL BE RATED FOR THE APPROPRIATE WORKING PRESSURE. [CFC §507.2.1, NFPA 24]
8. PAINTING OF CURBS, FIRE HYDRANTS, PADS, PROTECTION OF FIRE HYDRANTS FROM PHYSICAL DAMAGE, AND ALL OTHER WORK NECESSARY PER PLANS SHALL BE COMPLETED BEFORE APPROVAL BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION. [CFC §507]
9. PRIVATE FIRE HYDRANTS SHALL BE PAINTED RED. [CFC §507.5.7.1]
10. PRIOR TO THE FINAL OCCUPANCY, A FIRE FLOW TEST SHALL BE WITNESSED BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION TO VERIFY AVAILABILITY OF THE REQUIRED FIRE FLOW. [CFC §507]

1. FIRE HYDRANTS SPACING SHALL BE AS FOLLOWS: [IFC §C102]
RESIDENTIAL – 500 FT UNSPRINKLERED; 600 FT SPRINKLERED.
COMMERCIAL – 300 FT UNSPRINKLERED; 400 FT SPRINKLERED.
12. WHERE NEW WATER MAINS ARE EXTENDED ALONG STREETS OR NEW STREETS ARE INSTALLED WHERE FIRE HYDRANTS ARE NOT NEEDED FOR PROTECTION OF THE STRUCTURES, FIRE HYDRANTS SHALL BE INSTALLED AT A MAXIMUM 1,000 FT SPACING TO PROVIDE FOR TRANSPORTATION HAZARDS. WHERE STREETS ARE PROVIDED WITH MEDIAN DIVIDERS OR HAVE FOUR (4) OR MORE TRAFFIC LANES AND HAVE A TRAFFIC COUNT OF MORE THAN 30,000 PER DAY, HYDRANTS ARE REQUIRED ON EACH SIDE OF THE STREET SPACED AT 500 FEET ON AN ALTERNATING BASIS. [IFC §C102.8]
13. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN THE RADIUS OF THE CUL-DR-SAC OR WITHIN 20 FT OF THE PERIMETER OF THE RADIUS OF THE CUL-DE-SAC.
14. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN 6 FEET OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREETLIGHT OR ANY OTHER OBSTRUCTION. [IFC §C102.12]
15. A MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A ONE-TWO FAMILY DWELLING SHALL NOT EXCEED 300 FT, AS MEASURED BY AN APPROVED ROUTE. [IFC §C102.4]
16. THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A FIRE DEPARTMENT CONNECTION (FDC) SHALL NOT EXCEED 100 FT, AS MEASURED BY AN APPROVED ROUTE. [IFC § C102.7]
17. THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO THE END OF A DEAD-END STREET SHALL NOT EXCEED 200 FT. [IFC §C102.6]
18. TWO SOURCES OF SUPPLY ARE REQUIRED WHENEVER THERE ARE 4 OR MORE FIRE HYDRANTS/SPRINKLER HEADS INSTALLED ON A SINGLE SYSTEM SECTION. CONTROL VALVES SHALL BE INSTALLED SO THAT NO MORE THAN 2 FIRE HYDRANTS CAN BE OUT OF SERVICE DUE TO A BREAK IN A WATER MAIN. [IFC §C104]
19. ALL FIRE APPARATUS ACCESS ROADS SHALL BE PAVED TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES, AND SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF THE FIRE APPARATUS. [IFC §503.2.3]
20. THE GRADIENT FOR THE FIRE APPARATUS ACCESS ROADS SHALL NOT EXCEED 12% ANGLES OF APPROACH AND ANGLES OF DEPARTURE SHALL NOT EXCEED 6% FOR 25 FEET PRIOR TO OR AFTER THE GRADE CHANGE, ADJACENT TO THE STRUCTURES GRADIENT SHALL NOT EXCEED 6% [IFC §503.2.7, §503.2.8]

21. THE TURNING RADIUS OF THE FIRE APPARATUS ACCESS ROADS SHALL BE NO LESS THAN 52 FT OUTSIDE AND 28 FT INSIDE TURNING RADIUS. [IFC § 503.2.4]

22. VERTICAL CLEARANCE OF ALL FIRE APPARATUS ACCESS ROADS SHALL NOT BE LESS THAN 13 FT 6 IN. [CFC §503.2.1]
23. FIRE APPARATUS ACCESS ROADS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF NOT LESS THAN 40 FT FLOW LINE TO THE FLOW LINE WITH PARALLEL PARKING UNOBSTRUCTED ON EITHER SIDE. NOT LESS THAN 32 FT WIDE, FLOW-LINE TO FLOW-LINE, WHERE PARKING IS PERMITTED ON THE INSIDE SIDE OF THE FIRE APPARATUS ACCESS ROAD, NOT LESS THAN 24 FT WIDE, FLOW-LINE TO FLOW-LINE, WHERE NO PARKING IS PERMITTED. ON EITHER SIDE, FIRE LANES THROUGH PARKING LOTS SHALL BE NOT LESS THAN 20 FT WIDE. [CFC §503.2.1.1]
24. A FIRE APPARATUS ACCESS ROAD SHALL BE REQUIRED WHEN ANY PORTION OF AN EXTERIOR WALL OF THE FIRST STORY IS LOCATED MORE THAN 150 FT FROM A FIRE DEPARTMENT VEHICLE ACCESS. THIS DISTANCE SHOULD BE INCREASED TO 250 FT IF THE BUILDING IS SPRINKLERED. [CFC §503.3.1]
25. APPROVED SECONDARY FIRE APPARATUS ACCESS SHALL BE PROVIDED FOR 100 OR MORE DWELLING UNITS, ROAD(S) WITH DEAD-ENDS OR WITH A SINGLE POINT OF ACCESS IN 60' OF THE COMMERCIAL AND INDUSTRIAL DEVELOPMENTS WHERE BUILDINGS EXCEED 2 STORIES OR 30 FEET IN HEIGHT, OR EXCEEDING 62,000 SQUARE FEET IN AREA. [CFC §503.3.2]
26. DEAD-END FIRE APPARATUS ROADS AND/OR FIRE LANES, PUBLIC OR PRIVATE, IN EXCESS OF 150 FT IN LENGTH SHALL BE PROVIDED WITH AN APPROVED TURN AROUND HAVING A MINIMUM DIAMETER OF 81 FT. [CFC §503.2.5]
27. ALL FIRE APPARATUS ACCESS ROADS SHALL BE MARKED BY PLACING APPROVED SIGNS AT THE START OF THE DESIGNATED FIRE LANE, ONE SIGN AT THE END OF THE FIRE LANE WITH THE OTHER SIDE OF THE ROAD, AND ONE 100 FT ALONG THE DESIGNATED FIRE LANES. SIGNS TO BE PLACED ON BOTH SIDES OF AN ACCESS ROADWAY IF NEEDED TO PREVENT PARKING ON EITHER SIDE, SIGNS TO BE INSTALLED NO HIGHER THAN 10 FT OR LESS THAN 4 FT FROM THE FINISHED PAVEMENT LEVEL. SIGNS SHALL BE PLACED ON THE PAVEMENT (IF NO CURB IS PROVIDED) SHALL BE PAINTED WITH A RED WEATHER RESISTANT PAINT IN ADDITION TO THE SIGNS. [CFC §503.3]

28. ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. SAID SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE IFC 503.6 AND IFC APPENDIX M.

NO PORTION OF THE SITE FALLS WITHIN A FEMA DESIGNATED SPECIAL FLOOD HAZARD AREA. SITE LOCATED ON PANEL 32003C2150E, DATED SEPTEMBER 27, 2002, TO REFLECT A LOMR. THIS PANEL SHOWS THAT THE PROJECT IS LOCATED WITHIN A ZONE X AND NOT LOCATED WITHIN A FEMA DESIGNATED 100-YEAR ZONE A OR SPECIAL FLOOD HAZARD AREA.

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA NEVADA", LATEST ISSUE; THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, CLARK COUNTY AREA NEVADA", LATEST REVISED EDITION; THE "SUMMERLIN IMPROVEMENT STANDARDS" FOR WORK IN THE SUMMERLIN AREA; AND OTHER APPLICABLE APPLIED STANDARDS ISSUED BY THE CLARK COUNTY ENGINEERING AGENCY, THE UNIFORM BUILDING CODE, AND ALL LOCAL CITY CODES AND ORDINANCES APPLICABLE, EXCEPT AS NOTED ON THIS SHEET AS "DEVIATIONS FROM STANDARDS".

- THE EXISTENCE AND LOCATION OF ANY OVERHEAD OR UNDERGROUND UTILITY LINES, PIPES, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A RESEARCH OF THE AVAILABLE RECORDS. EXISTING UTILITIES AS SHOWN FROM CLV PLANS LIBRARY AND CUMMULATE AND FOR RECORD PURPOSES. EXISTING UTILITIES ARE LOCATED ON PLANS ONLY FOR THE CONVENIENCE OF THE CONTRACTOR. EXISTING UTILITY SERVICE LATERALS MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, LOCATE ALL UNDERGROUND AND OVERHEAD INTERFERENCE'S WHICH MAY AFFECT THE OPERATION OF THE PAVING OPERATION AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO SAME. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD UTILITIES SO AS TO SAFELY PROTECT ALL PERSONNEL AND EQUIPMENT, AND SHALL BE RESPONSIBLE FOR ALL COST AND LIABILITY IN CONNECTION THEREWITH.
3. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING STRUCTURES AND STREET IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE, AND ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED SATISFACTORY TO THE CITY ENGINEER AND OWNING UTILITY COMPANY AT THE EXPENSE OF THE CONTRACTOR.
4. ALL CONSTRUCTION SHALL BE AS SHOWN ON THESE PLANS, ANY REVISIONS SHALL HAVE THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.
5. TYPE V CEMENT SHALL BE USED IN ALL OFF-SITE CONCRETE WORK. CONCRETE TO BE 3000 P.S.I. MINIMUM @ 28 DAYS. MIX DESIGNS TO BE APPROVED BY THE CITY, PRIOR TO THE USE ON THE PROJECT.
6. PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.
7. EXPANSION JOINTS REQUIRED, MAXIMUM EVERY 300' IN EXTRUDED-TYPE CURB.
8. AC PAVEMENT TO BE ONE-HALF INCH (1/2") ABOVE UP OF ALL GUTTERS AFTER COMPLETION, EXCEPT AT SIDEWALK RAMPS AND CROSS GUTTERS.
9. CURB AND GUTTER FOUND TO BE UNACCEPTABLE TO THE CITY OF LAS VEGAS SHALL BE REMOVED AND REPLACED PER STANDARD DRAWING 216.
10. SIDEWALK RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 235. EXACT LOCATION OF RAMPS MAY BE ADJUSTED IN THE FIELD BY A CITY INSPECTOR.
11. CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL ADJUSTMENTS BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND FOR INGRESS AND EGRESS TO NEW CONSTRUCTION. THE EXTENT OF THE TRANSITIONS TO BE AS SHOWN ON PLANS.
12. ALL GRADING WORK SHALL CONFORM TO THE SOILS REPORT AS PREPARED BY THE ANGLE ENGINEER, PROJECT NUMBER 77053-1, DATED MAY 28, 2014, APPROVED BY THE CITY ENGINEER, AND AS SHOWN ON THESE PLANS.
13. EXACT LOCATION OF ALL SAWCUT LINES MAY BE ADJUSTED OR DETERMINED IN THE FIELD BY A CITY OF LAS VEGAS ENGINEER IF LOCATION ON PLANS IS NOT CLEARLY SHOWN, OR EXISTING PAVEMENT CONDITION REQUIRES RELOCATIONS.
14. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING PERMANENT SURVEY MONUMENTS. ANY MONUMENTS DISTURBED SHALL BE REPLACED AND ADJUSTED PER AVAILABLE RECORDS IN ACCORDANCE WITH N.R.S. STATUTE NO. 625.380 & CITY OF LAS VEGAS TITLE 18, APPENDIX D.
15. THE CONTRACTOR MAY ORDER BOXES, MANHOLE LIDS, VALVE COVERS, ETC., SHALL BE LOCATED OUT OF DRIVEWAYS, DRIVEWAY APRONS, FLOWLINES, AND CROSS GUTTERS UNLESS WRITTEN APPROVAL IS GRANTED BY THE UTILITY COMPANY AND THE CITY ENGINEER.

16. ALL WALLS, NEW OR EXISTING, ARE ONLY SHOWN ON CIVIL PLANS FOR THE PURPOSE OF REVIEWING GRADING RELATIONSHIPS; FLOOD CONTROL AND SIGHT DISTANCE AT INTERSECTIONS. NEW WALLS REQUIRE A SEPARATE PERMIT AND INSPECTION BY THE BUILDING DEPARTMENT.

1. ASPHALT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT WITHIN CITY RIGHT OF WAY.
18. CONTRACTOR SHALL ADJUST ALL NEW AND EXISTING INLETS, VALVE BOXES, MANHOLE RIMS, AND SEWER CLEAN OUTS, ETC. TO FINISH GRADE AS APPLICABLE WHETHER OR NOT THEY ARE SHOWN ON THE PLANS.
19. MATERIALS, HANDLING AND PLACEMENT OF PORTLAND CEMENT CONCRETE SHALL BE IN ACCORDANCE WITH APPLICABLE SECTIONS OF NDOT OR THE CLARK COUNTY AREA SPECIFICATIONS (AS APPLICABLE) AND THE PLANS AND DETAILS SHOWN HEREON.
20. WHEN INSTALLING UNDERGROUND FACILITIES THAT REQUIRE UNDERGROUND LOCATING DEVICES SUCH AS MARKER BALLS, LOCATING RIBBON, ETC., THE CONTRACTOR SHALL PROVIDE WRITTEN DOCUMENTATION TO THE OFFSITE INSPECTION AND TESTING CERTIFYING THAT ALL DEVICES HAVE BEEN PLACED AND VERIFIED TO BE IN GOOD WORKING CONDITION PRIOR TO THE CONSTRUCTION OF ANY ROAD BASE.
21. SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S) SHALL BE PROVIDED TO THE CITY PRIOR TO ACCEPTANCE OF FACILITY VIDEO INSPECTION. THE MAP(S) SHALL INCLUDE THE HORIZONTAL AND VERTICAL (INVERT) LOCATION OF PUBLIC SEWER MANHOLES, STORM DRAIN MANHOLES AND TRANSITION STRUCTURES, STORM DRAIN LATERALS AT THE CONNECTION TO THE STORM DRAIN MAIN AND AT THE CONNECTION TO A DROP INLET, THE CONNECTION OF SEWER SERVICE LATERALS TO THE SEWER MAIN AND WHERE THE SEWER SERVICE LATERALS EXIT THE PUBLIC RIGHT-OF-WAY, AND STORM DRAIN MAIN ALIGNMENT, INCLUDING DEFLECTION POINTS. THE LOCATION SHALL BE DESCRIBED BY COORDINATES WHICH SHALL BE BASED ON THE OFFICIAL "NAD 83" AND "HORIZONTAL CONTROL" CONTAINED WITHIN THE CITY OF LAS VEGAS. A SEPARATE ELECTRONIC COMMA DELIMITED FILE FOR THE SANITARY SEWER AND STORM DRAIN COORDINATES SHALL ALSO ACCOMPANY THE SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S).
- OR
- ~~21. SANITARY SEWER AND STORM DRAIN FACILITIES SHOWN ON THESE PLANS SHALL BE USED TO MEET THE REQUIREMENTS ON ARES 685 AND SHALL SHOW AT MINIMUM THE HORIZONTAL AND VERTICAL (INVERT) LOCATION OF PUBLIC SEWER MANHOLES, STORM DRAIN MANHOLES, STORM DRAIN LATERALS AT THE CONNECTION TO THE STORM DRAIN MAIN AND AT THE CONNECTION TO A DROP INLET, AND THE CONNECTION OF SEWER SERVICE LATERALS TO THE SEWER MAIN AND WHERE THE SEWER SERVICE LATERALS EXIT THE PUBLIC RIGHT-OF-WAY. ANY DEVIATIONS FROM THE INFORMATION SHOWN SHALL BE NOTED AND SUBMITTED AS A REVISION TO THE PLANS AND APPROVED PRIOR TO ACCEPTANCE OF FACILITY VIDEO INSPECTION.~~
22. CCTV VIDEO INSPECTION IS REQUIRED FOR ALL SEWER AND STORM DRAINS. THE CCTV VIDEO INSPECTIONS NEED TO BE PERFORMED PER THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS LATEST EDITION.
23. A SEPARATE BORING PERMIT IS REQUIRED FOR ALL BORING ACTIVITIES.

1. NONE

ALL CONSTRUCTION SIGNING, BARRICADING, AND TRAFFIC DELINEATION SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION.

THE STREET SIGN CONTRACTOR SHALL OBTAIN STREET NAMES AND BLOCK NUMBERING FROM THE PLANNING DEPARTMENT PRIOR TO CONSTRUCTION.

BEFORE ANY WORK IS STARTED IN THE RIGHT-OF-WAY, THE CONTRACTOR SHALL INSTALL ALL ADVANCED WARNING SIGNS AND BARRICADES IN THE WORK ZONE. THE CONTRACTOR SHALL INSTALL TEMPORARY STOP SIGNS AT ALL NEW STREET ENCROACHMENTS INTO EXISTING CITY STREETS WHERE WARRANTED IMMEDIATELY AFTER THE WORK IS COMPLETED, AND SHALL MAINTAIN SAID SIGNS UNTIL PERMANENT SIGNS ARE INSTALLED.

3. WHEN A DESIGNATED "SAFE ROUTE TO SCHOOL" IS ENCLOSED UPON BY A CONSTRUCTION WORK ZONE AND PUBLIC WORKS STAFF IDENTIFIES A NEED FOR STUDENTS TO BE ASSISTED IN THE SAFE CROSSING THROUGH THAT WORK ZONE, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE A QUALIFIED "CROSSING GUARD." THE GUARD SHALL BE PRESENT FOR THE FULL DURATION OF TIME THAT CHILDREN ARE LIKELY TO BE PRESENT.
5. IF THE IMPROVEMENTS NECESSITATE THE OBLITERATION, TEMPORARY OBSTRUCTION, TEMPORARY REMOVAL OR RELOCATION OF ANY EXISTING TRAFFIC PAVEMENT MARKING, SUCH PAVEMENT MARKING SHALL BE RESTORED OR REPLACED WITH LIKE MATERIALS TO THE SATISFACTION OF THE CITY TRAFFIC ENGINEER.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL PERMANENT SIGNS SHOWN ON THE PLANS. ALL NEW SIGNS SHALL BE FABRICATED WITH CORNER ZONE 300 SERIES 1160 REFLECTIVE SHEETING OR APPROVED EQUAL. ALL NEW TRAFFIC SIGNS, EXCEPT STREET NAME AND SCHOOL SPEED LIMIT SIGNS, SHALL HAVE 3M SERIES 1160 OR APPROVED EQUIVALENT ANTI-GRAFFITI PROTECTIVE OVERLAY FILM; CORNER ZONE 300 SERIES 1160 REFLECTIVE SHEETING OR APPROVED EQUAL. ALL STREET NAME SIGNS SHALL CONFORM IN THEIR ENTIRETY TO CURRENT CITY STANDARDS. ALL OTHER SIGNS SHALL BE STANDARD SIZE UNLESS OTHERWISE SPECIFIED ON THE PLANS. ALL SIGN POSTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT CITY STANDARDS.
7. WHEN A PROPOSED STREET LIGHT STANDARD IS LOCATED WITHIN FIVE (5') FEET OF ANY PROPOSED SIGN SHOWN ON THE PLANS TO BE MOUNTED ON A SIGNPOST, THE SIGNPOST SHALL BE MOUNTED ON THE STREET LIGHT STANDARD AND THE SIGNPOST SHALL BE ELIMINATED.
8. ALL PERMANENT TRAFFIC CONTROL DEVICES CALLED FOR HEREON SHALL BE IN PLACE AND IN FINAL POSITION PRIOR TO ALLOWING ANY PUBLIC TRAFFIC ONTO THE PORTIONS OF THE ROAD(S) BEING IMPROVED HERE UNDER, REGARDLESS OF THE STATUS OF COMPLETION OF PAVING OR OTHER OFF-SITE IMPROVEMENTS CALLED FOR BY THESE PLANS.
9. STREET SIGNS AND STOP SIGNS SHALL BE INSTALLED PER CITY STANDARD SPECIFICATIONS FOR PLACEMENT OF STREET NAME SIGNS.
10. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TRAFFIC CONTROL DEVICES AND FLAGGERS TO INSURE THE SAFETY OF THE PUBLIC IN OR AROUND THE WORK AREA. THE CONTRACTOR SHALL HAVE A CERTIFIED ATSSA TRAFFIC CONTROL TECHNICIAN OR ISMA WORK ZONE SAFETY SPECIALIST SET UP, MAINTAIN AND/OR REMOVE ALL TRAFFIC CONTROL DEVICES IN THE CITY OF LAS VEGAS RIGHT-OF-WAY.
11. WORK IN PUBLIC STREETS, ONCE BEGUN, SHALL BE EXPEDITED TO COMPLETION SO AS TO PROVIDE MINIMUM INCONVENIENCE TO ADJACENT PROPERTY OWNERS AND TO THE TRAVELING PUBLIC.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING CITIZENS AREA TRANSIT (C.A.T.) IF THE CONSTRUCTION INTERRUPTS OR RELOCATES A BUS STOP OR HAS AN ADVERSE EFFECT ON BUS SERVICE ON THAT STREET TO ARRANGE FOR TEMPORARY RELOCATION OF STOP.
13. GUARDS SHALL BE OBTAINED BY CONTACTING THE METROPOLITAN POLICE DEPARTMENT SPECIAL EVENTS UNIT (PHONE # 828-3442) WHO WILL PROVIDE OFFICERS PROPERLY TRAINED IN TRAFFIC CONTROL. FEES FOR THE USE OF THESE OFFICERS SHALL BE SET BY METRO AND WILL BE PAID BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR ALL ARRANGEMENTS WITH METRO.
14. ANY WORK WITHIN 300' OF A SIGNALIZED INTERSECTION WILL BE NIGHT WORK, UNLESS DIRECTED BY THE CITY OF LAS VEGAS TRAFFIC ENGINEER.

REvised 4/15/10

	LOT NUMBER		FUTURE ELEVATION
	BLOCK NUMBER		GRADE BREAK ELEVATION
	PAD ELEVATION FINISH FLOOR ELEVATION		PROPOSED ELEVATION
	EXISTING PAD ELEVATION EXIST. FINISH FLOOR ELEV.		EXISTING ELEVATION
	SCARP		RIGHT-OF-WAY
	EXISTING CONTOUR (5' INTERVAL)		PROPERTY LINE
	EXISTING CONTOUR (1' INTERVAL)		CENTER LINE
	CONCRETE DRIVEWAY		RETAINING WALL
	TOP OF FOOTING		KNEE WALL
	TOP OF RETAINING WALL		PERIMETER WALL
	STORM DRAIN MANHOLE		STORM DRAIN LINE
	SVZ – SIGHT VISIBILITY ZONE, NO STRUCTURES/ LANDSCAPING TALLER THAN 24"		SIDEWALK
	CURB TRANSITION AT SIDEWALK RAMP (ROLL CURB TO "L" CURB)		DITCH OR SWALE

SOUTH 89°39'55" EAST, BEING THE BEARING OF THE NORTH LINE OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 13, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., AS SHOWN BY MAP THEREOF ON FILE IN FILE 91, PAGE 28 OF PARCEL MAPS IN THE CLARK COUNTY RECORDER'S OFFICE, CLARK COUNTY, NEVADA.

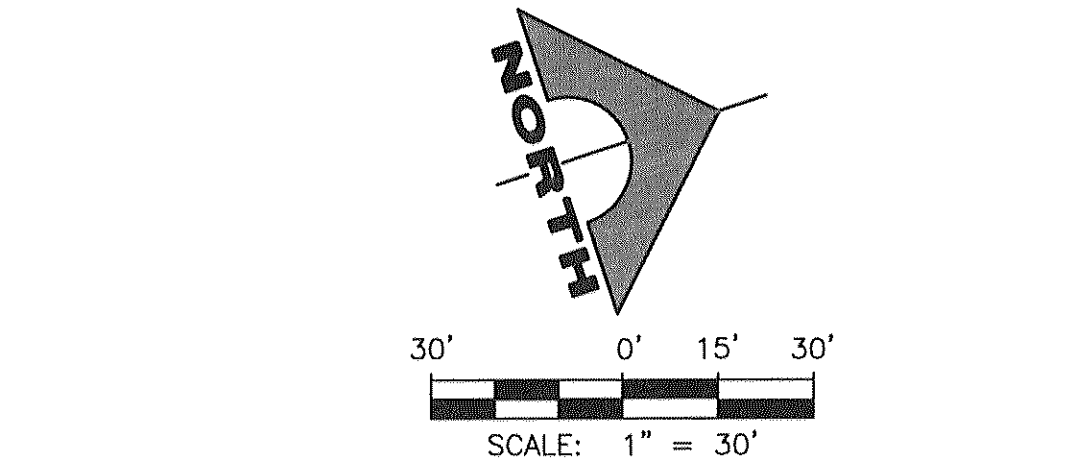
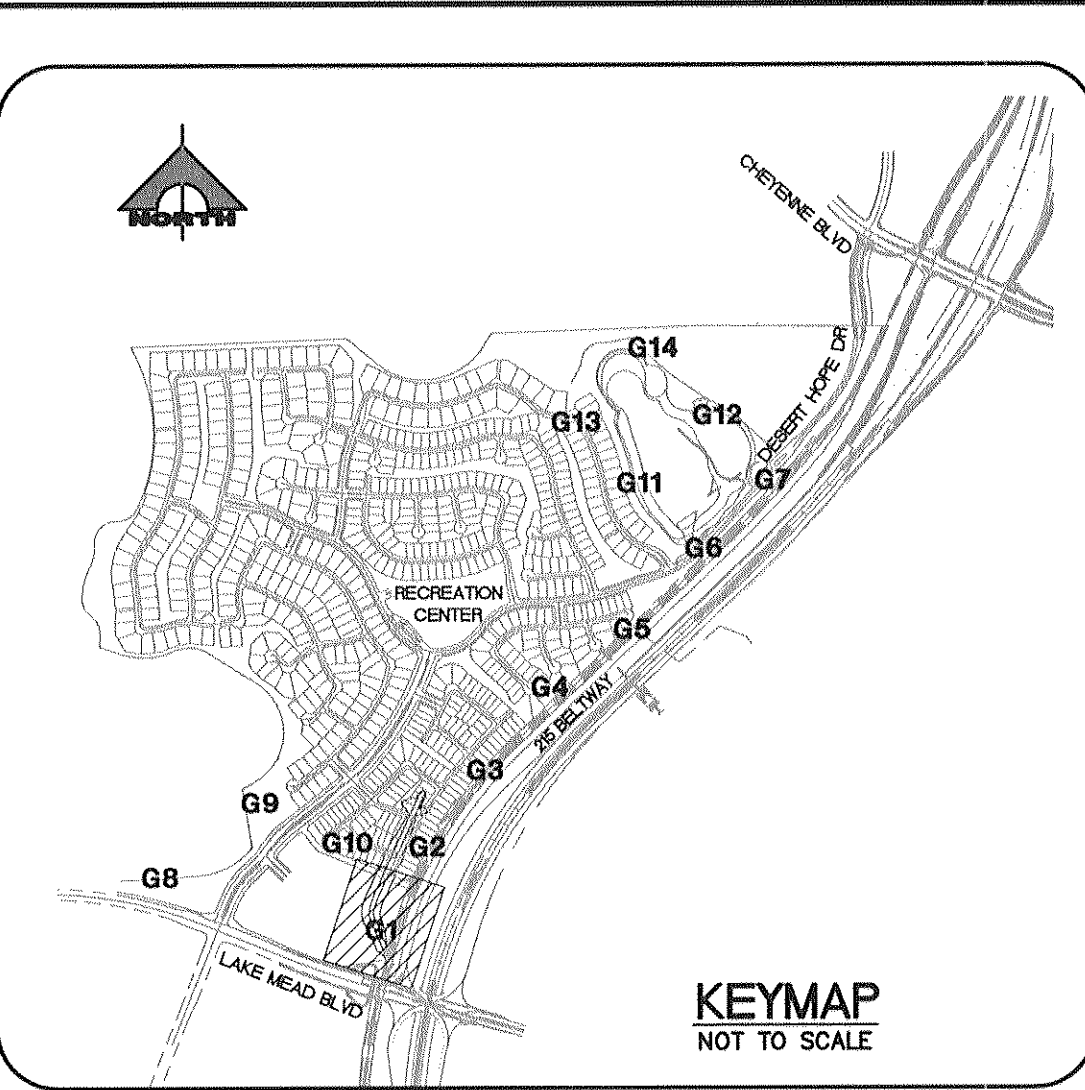
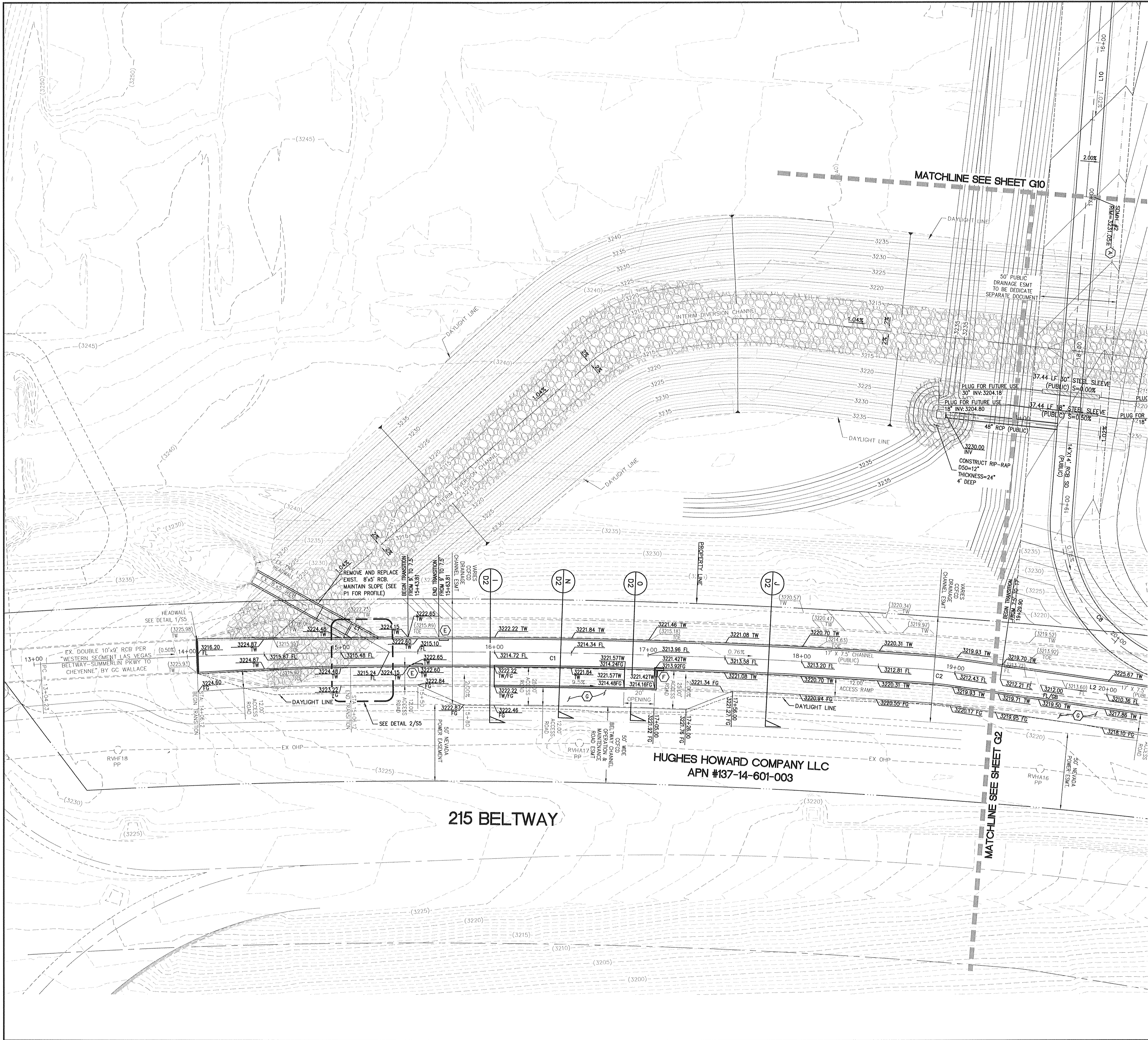
CITY OF LAS VEGAS BENCHMARK #0368 3
USC&GS DISC SET IN ROCK EAST OF CHARLESTON SOUTH OF DETENTION BASIN

ELEV (NAVD 88) = 989.5990 METERS
3246.71 U.S. SURVEY FEET
SUMMERLIN WEST: CLV NAVD 88/93
ELEV = 989.5703 METERS
3246.62 U.S. SURVEY FEET

ITEM	QUANTITY	UNIT
DUAL 10"x14" RCB	125	LF
TRANSITION FROM DUAL 10"x14" RCB TO 14"x14" RCB	50	LF
14"x14" RCB	893	LF
20"x7" RCB	330	LF
24" RCP	377	LF
30" RCP	337	LF
36" RCP	523	LF
42" RCP	359	LF
48" RCP	524	LF
48" STORM DRAIN ACCESS	3	EA
48" TYPE I SD MANHOLE	1	EA
48" TYPE II SD MANHOLE	3	EA
60" TYPE III SD MANHOLE	3	EA
TRANSITION FROM 20.7' TO 17' WDE RECT. CONC. CHANNEL, 9' DEEP	100	LF
17'X9' RECT. CONCRETE CHANNEL	38	LF
TRANSITION FROM 17'X9' TO 17'X7.5' RECT. CONCRETE CHANNEL	20	LF
17'X7.5' RECT. CONCRETE CHANNEL	564	LF
TRANSITION FROM 17' TO 15' WDE RECT. CONC. CHANNEL, 7.5' DEEP	50	LF
15'X7.5' RECT. CONCRETE CHANNEL	388	LF
TRANSITION FROM 15' TO 11' WDE RECT. CONC. CHANNEL, 7.5' DEEP	62	LF
11'X6.8' RECT. CONCRETE CHANNEL	2,124	LF
TRANSITION FROM 11'X6.8' RECT. TO 20'X5', 2:1 TRAP. CHANNEL	101	LF
20'X17' RECT. CONCRETE CHANNEL	25	LF
TRANSITION 20'X17' TO 20'X9' RECT. CONCRETE CHANNEL	100	LF
20'X9' RECT. CONCRETE CHANNEL	179	LF
TRANSITION FROM 20'X9' TO 20'X8' RECT. CONCRETE CHANNEL	20	LF
20'X8' RECT. CONCRETE CHANNEL	383	LF
TRANSITION FROM 20'X8' TO 20'X6.8' RECT. CONCRETE CHANNEL	41	LF
20'X6.8' RECT. CONCRETE CHANNEL	2,062	LF
18" STEEL SLEEVE	38	LF
24" STEEL SLEEVE	38	LF
RIP-RAP - D50=12", T=24"	14,705	CY
RIP-RAP - D50=18", T=36"	19,462	CY
RIP-RAP - D50=24", T=48"	2,665	CY
RIP-RAP - D50=36", T=72"	6,808	CY
6' WDE FLUME	860	LF

Call before you Dig Avoid cutting underground utility lines and society  1-800-227-2600	<i>FAST</i>  Call before you Under Ground 1-702-432-6300 PREVENT AND MITIGATE SYSTEM OF TRANSPORTATION	CALL BEFORE YOU DO OVERHEAD  1-702-227-2929
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NOTE TO CONTRACTOR
CONTRACTOR TO VERIFY ALL EXISTING SEWER, STORM DRAIN, & WATER SIZES, INVERTS AND LOCATIONS. IF A DISCREPANCY EXISTS, CONTRACTOR TO NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION.

BASIS OF BEARING
SOUTH 89°39'55" EAST, BEING THE BEARING OF THE NORTH LINE OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 13, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., AS SHOWN BY MAP THEREOF ON FILE IN FILE 91, PAGE 28 OF PARCEL MAPS IN THE CLARK COUNTY RECORDER'S OFFICE, CLARK COUNTY, NEVADA.

BENCHMARK
CITY OF LAS VEGAS BENCHMARK #0368.3
USC&GS DISC SET IN ROCK EAST OF CHARLESTON SOUTH OF DETENTION BASIN
ELEV (NAVD 88) = 989.5990 METERS
SUMMERLIN WEST: CLV NAVD 88/93
ELEV = 989.5703 METERS
3246.62 U.S. SURVEY FEET

STORM DRAIN NOTES:
A) CONSTRUCT 48" TYPE I MANHOLE PER USDOCA DWG NO. 403. SEE STRUCTURAL PLANS FOR BOX PENETRATION DETAIL.
B) CONSTRUCT 48" TYPE I MANHOLE PER USDOCA DWG NO. 403.1.
C) CONSTRUCT 48" TYPE II MANHOLE PER USDOCA DWG NO. 405.1.
D) CONSTRUCT 60" TYPE III MANHOLE PER USDOCA DWG NO. 406.1.
E) CONSTRUCT LADDER PER DETAIL 11 ON SHEET S2. SEE SHEET C3 FOR LOCATION TABLE.
F) CONSTRUCT SPLASH GUARD AT CHANNEL ACCESS RAMP WALL PER DETAIL 3 ON SHEET S7.
G) CONSTRUCT 2" AC PAVEMENT OVER 4" TYPE II AB.
H) CONSTRUCT 2" CRUSHED GRAVEL OVER 4" TYPE II 95% COMPACTION FOR H2O DRIVABLE SURFACE.
I) CONSTRUCT 6' WIDE FLUME PER DETAIL B ON SHEET S19.

NOTE:
ALL EXISTING UTILITIES SHOWN FOR GRAPHICAL PURPOSES ONLY. CONTRACTOR RESPONSIBLE FOR UTILITY LOCATE AND VERIFICATION ENGINEER MUST BE NOTIFIED OF ANY DISCREPANCIES.

FLOOD ZONE NOTE:
FLOOD ZONE: NOT IN 100 YEAR ZONE.
FIRM PANEL #3200322150E
REVISED: SEPT 27, 2002.

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call
1-800-227-2600

FAST
before you Call
UnderGround
1-702-432-6300
FREEMAN AND ARTERIAL SYSTEM OF TRANSPORTATION

CALL BEFORE YOU DO OVERHEAD
Avoid hitting overhead power lines. It's costly.
Call before you DO OVERHEAD
1-702-227-2929

DRAINAGE CERTIFICATION
I CERTIFY THAT THE GRADING PLANS ARE IN CONFORMANCE WITH THE APPROVED DRAINAGE STUDY ON FILE AT THE CITY OF LAS VEGAS FOR THIS PROJECT.
WESLEY T. PETTY P.E. 16369 DATE 3/17/14

ENGINEER'S EVALUATION OF GRADING QUANTITIES
PLEASE NOTE: THESE QUANTITIES ARE ESTIMATES ONLY. ACTUAL QUANTITIES MAY DIFFER FROM THE ESTIMATE DUE TO SOILS VARIATIONS IN THE FIELD. VOLUMES CALCULATED WITHOUT SHRINKAGE OR SUBSIDENCE FACTORS AND DO NOT INCLUDE OVEREXCAVATION REQUIRED FOR THE REMOVAL OF CALICHE OR ANY OTHER UNDESIRABLE MATERIALS. REFER TO THE SOILS REPORT FOR THESE AREAS. ALSO NOT INCLUDED ARE QUANTITIES FOR ADDITIONAL DITCHES & BERMS NOT SHOWN THAT MAY BE REQUIRED BY THE ENGINEER.
COMPUTED CUT VOLUME: 1,383,691 CYS
COMPUTED FILL VOLUME: 1,727,100 CYS
IMPORT: 343,409 CYS

PROJECT NO.
764-204-013

DESIGN:
764-204-013

DRAWN:
764-204-013

CHECK:
764-204-013

PLOT DATE:
03-17-16

PLOT TIME:
14:21:55

1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gownengineering.com

PULTE HOMES

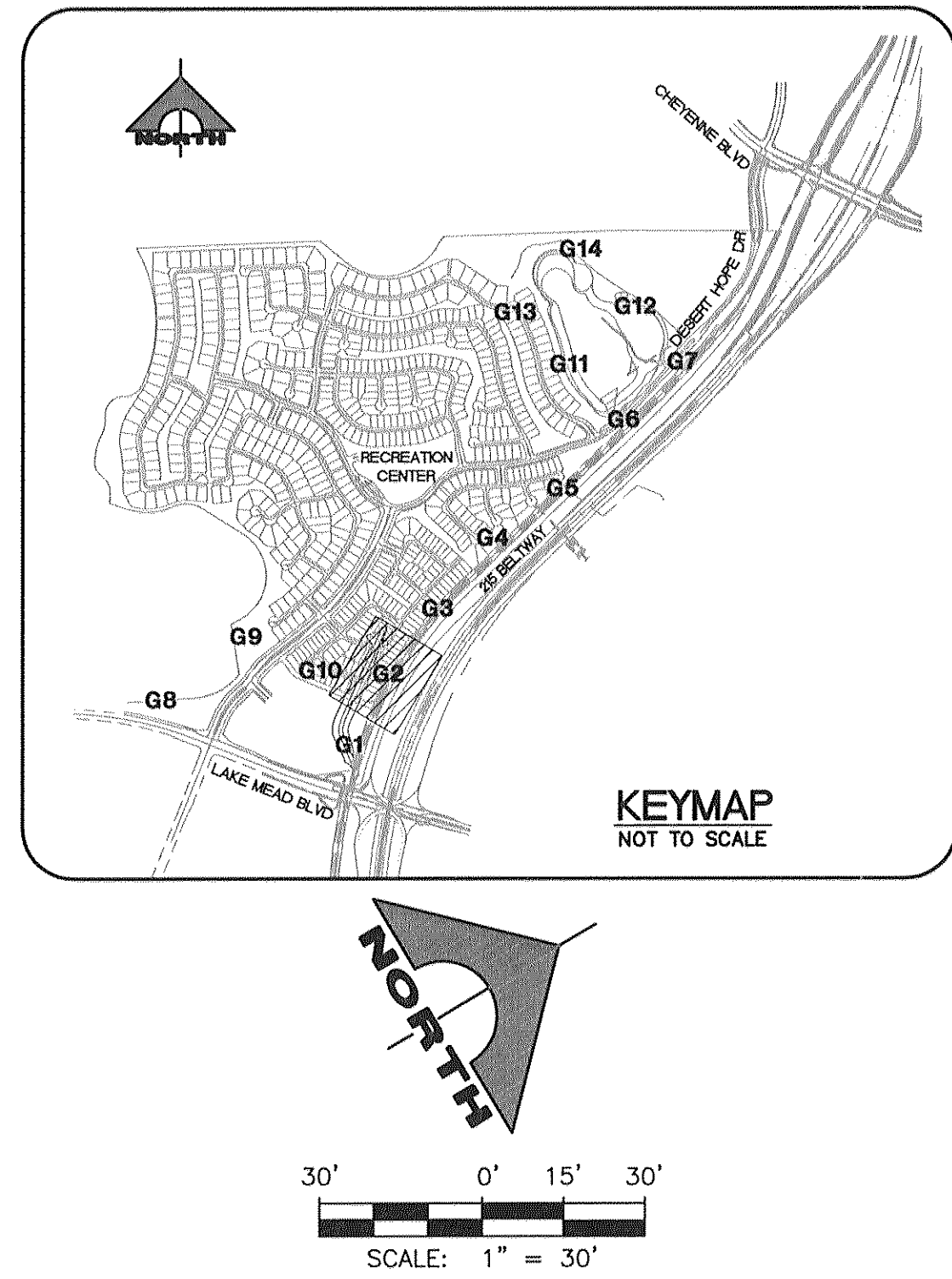
SUMMERLIN VILLAGE 26 - REFERENCE OFFSITE DRAINAGE IMPROVEMENTS

GRADING PLAN I

DRAWING
G1

5 OF 87 SHTS

% COMPLETE



CONTRACTOR TO VERIFY ALL EXISTING SEWER, STORM DRAIN, & WATER SIZES, INVERTS AND LOCATIONS. IF A DISCREPANCY EXISTS, CONTRACTOR TO NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION.

SOUTH 89°39'55" EAST, BEING THE BEARING OF THE NORTH LINE OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 13, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., AS SHOWN BY MAP THEREOF ON FILE IN FILE 91, PAGE 28 OF PARCEL MAPS IN THE CLARK COUNTY RECORDER'S OFFICE, CLARK COUNTY, NEVADA.

CITY OF LAS VEGAS BENCHMARK #0368 3
 USCGS DISC SET IN ROCK EAST OF CHARLESTON SOUTH OF DETENTION BASIN
 ELEV (NAVD 88) = 989.5990 METERS
 3246.71 U.S. SURVEY FEET
 SUMMERLIN WEST: CLV NAVD 88/93
 ELEV = 989.5703 METERS
 3246.62 U.S. SURVEY FEET

- (A) CONSTRUCT 4" TYPE I MANHOLE PER USDOCA DWG NOL 403. SEE STRUCTURAL PLANS FOR BOX PENETRATION DETAIL.
- (B) CONSTRUCT 48" TYPE I MANHOLE PER USDOCA DWG NO. 403.1.
- (C) CONSTRUCT 48" TYPE II MANHOLE PER USDOCA DWG NO. 405.1.
- (D) CONSTRUCT 60" TYPE III MANHOLE PER USDOCA DWG NO. 406.1.
- (E) CONSTRUCT LADDER PER DETAIL 11 ON SHEET S2. SEE SHEET C3 FOR LOCATION TABLE.
- (F) CONSTRUCT SPLASH GUARD AT CHANNEL ACCESS RAMP WALL PER DETAIL 3 ON SHEET S7.
- (G) CONSTRUCT 2" AC PAVEMENT OVER 4" TYPE II AB.
- (H) CONSTRUCT 2" CRUSHED GRAVEL OVER 4" TYPE II 95% COMPACTION FOR H20 DRIVABLE SURFACE.
- (I) CONSTRUCT 6" WIDE FLUME PER DETAIL B ON SHEET S19.

ALL EXISTING UTILITIES SHOWN FOR GRAPHICAL PURPOSES ONLY, CONTRACTOR RESPONSIBLE FOR UTILITY LOCATE AND VERIFICATION ENGINEER MUST BE NOTIFIED OF ANY DISCREPANCIES.

FLOOD ZONE: NOT IN 100 YEAR ZONE.
FIRM PANEL #32003C2150E
REVISED: SEPT 27, 2002.

DRAINAGE CERTIFICATION

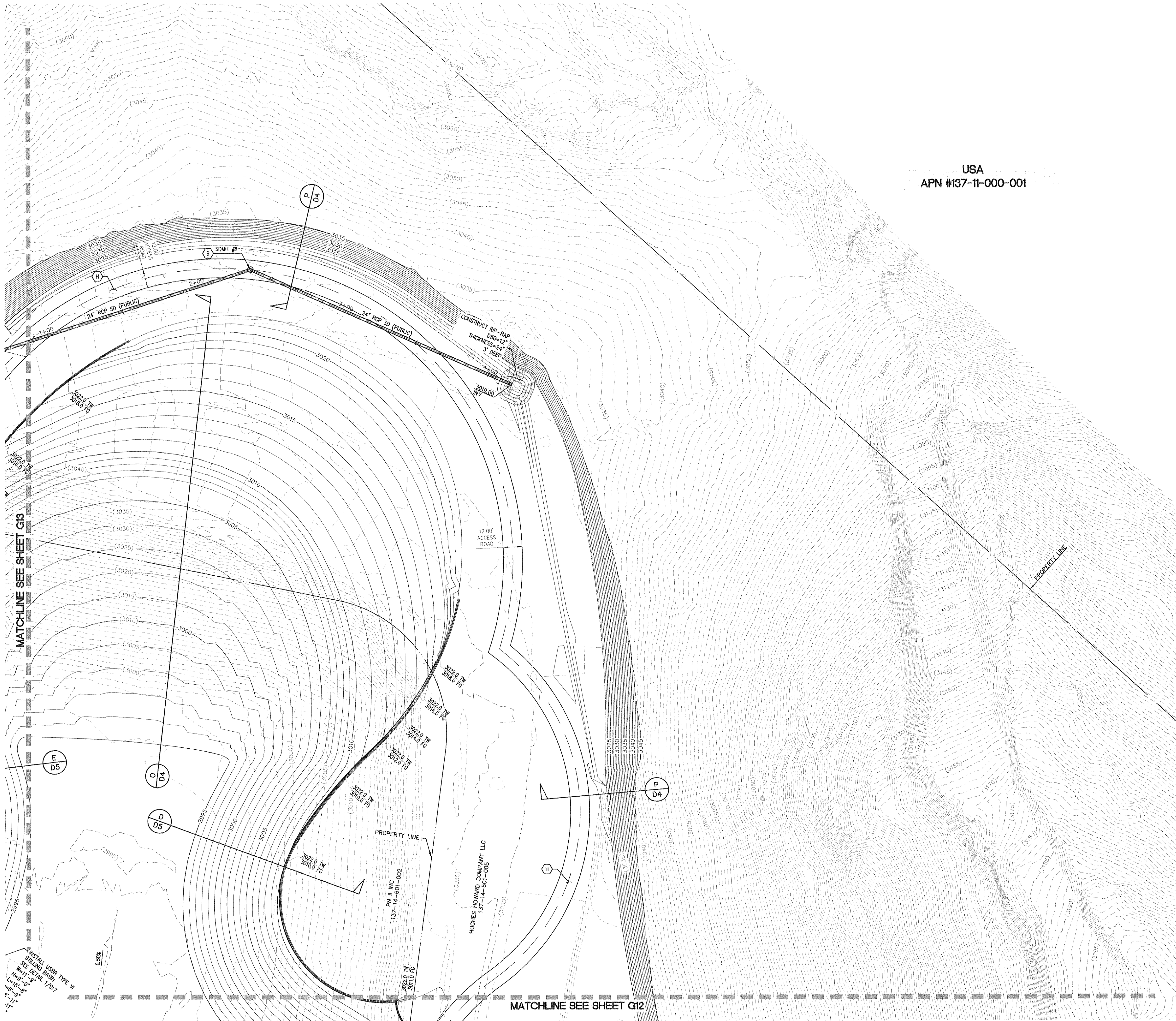
I CERTIFY THAT THE GRADING PLANS ARE IN CONFORMANCE WITH THE APPROVED DRAINAGE STUDY ON FILE AT THE CITY OF LAS VEGAS FOR THIS PROJECT.

 _____ DATE 3/7/16

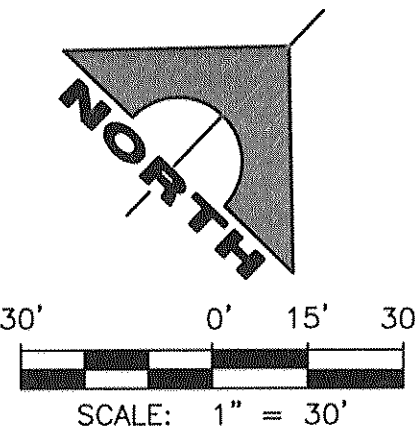
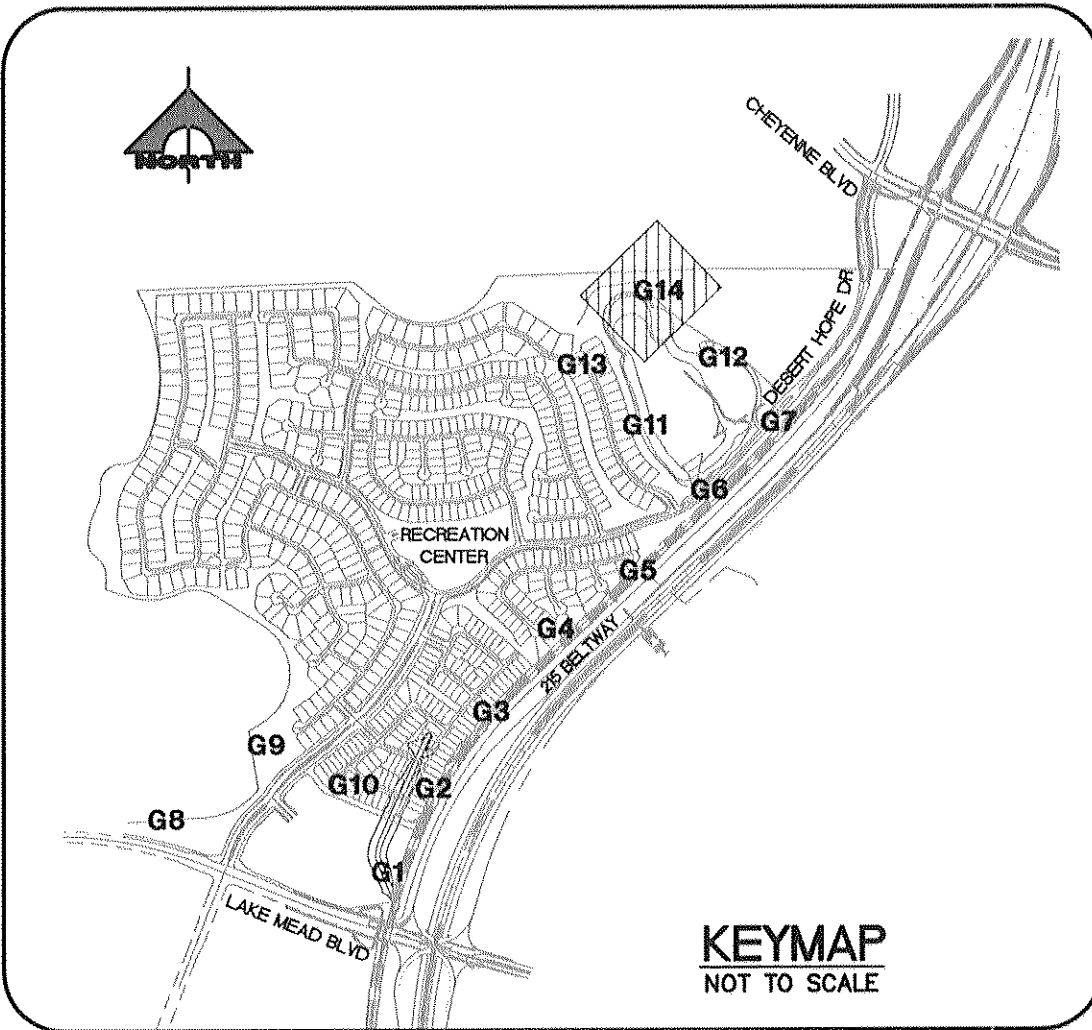
WESLEY T. PETTY P.E. 16369

PLEASE NOTE THESE QUANTITIES ARE ESTIMATES ONLY. ACTUAL QUANTITIES MAY DIFFER FROM THE ESTIMATE DUE TO SOILS VARIATIONS IN THE FIELD. VOLUMES CALCULATED WITHOUT CONSIDERING SHRINKAGE FACTORS AND DO NOT INCLUDE OVEREXCAVATION REQUIRED FOR THE REMOVAL OF CALCINE OR ANY OTHER UNDESIRABLE MATERIALS. REFER TO THE SOILS REPORT FOR THESE AREAS. ALSO NOT INCLUDED ARE QUANTITIES FOR ADDITIONAL DITCHES & BERMS NOT SHOWN THAT MAY BE REQUIRED BY THE ENGINEER.

COMPUTED CUT VOLUME: 1,383,691 CYS
COMPUTED FILL VOLUME: 1,727,100 CYS
IMPORT: 343,409 CYS



USA
APN #137-11-000-001



NOTE TO CONTRACTOR

CONTRACTOR TO VERIFY ALL EXISTING SEWER, STORM DRAIN, & WATER SIZES, INVERTS AND LOCATIONS. IF A DISCREPANCY EXISTS, CONTRACTOR TO NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION.

BASIS OF BEARING

SOUTH 89°38'55" EAST, BEING THE BEARING OF THE NORTH LINE OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 13, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., AS SHOWN BY MAP THEREOF ON FILE IN FILE 91, PAGE 28 OF PARCEL MAPS IN THE CLARK COUNTY RECORDER'S OFFICE, CLARK COUNTY, NEVADA.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK #0368.3
USC&GS DISC SET IN ROCK EAST OF CHARLESTON SOUTH OF DETENTION BASIN
ELEV (NAVD 88) = 989.5990 METERS
3248.71 U.S. SURVEY FEET
SUMMERLIN WEST: CLV NAVD 88/93
ELEV = 989.5703 METERS
3246.62 U.S. SURVEY FEET

STORM DRAIN NOTES:

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- (I) CONSTRUCT 6' WIDE FLUME PER DETAIL B ON SHEET S19.

NOTE:

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FLOOD ZONE NOTE:

FLOOD ZONE: NOT IN 100 YEAR ZONE.
FIRM PANEL #300322152
REVISED: SEPT 27, 2002.



DRAINAGE CERTIFICATION

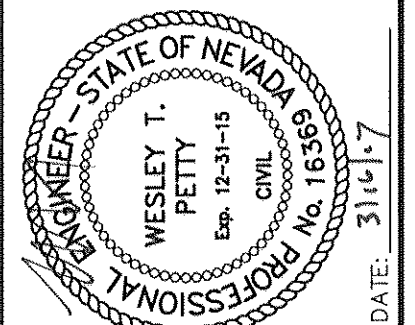
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WESLEY T. PETTY P.E. 16369 3/17/16 DATE

ENGINEER'S EVALUATION OF GRADING QUANTITIES

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IMPORT: 343,409 CYS



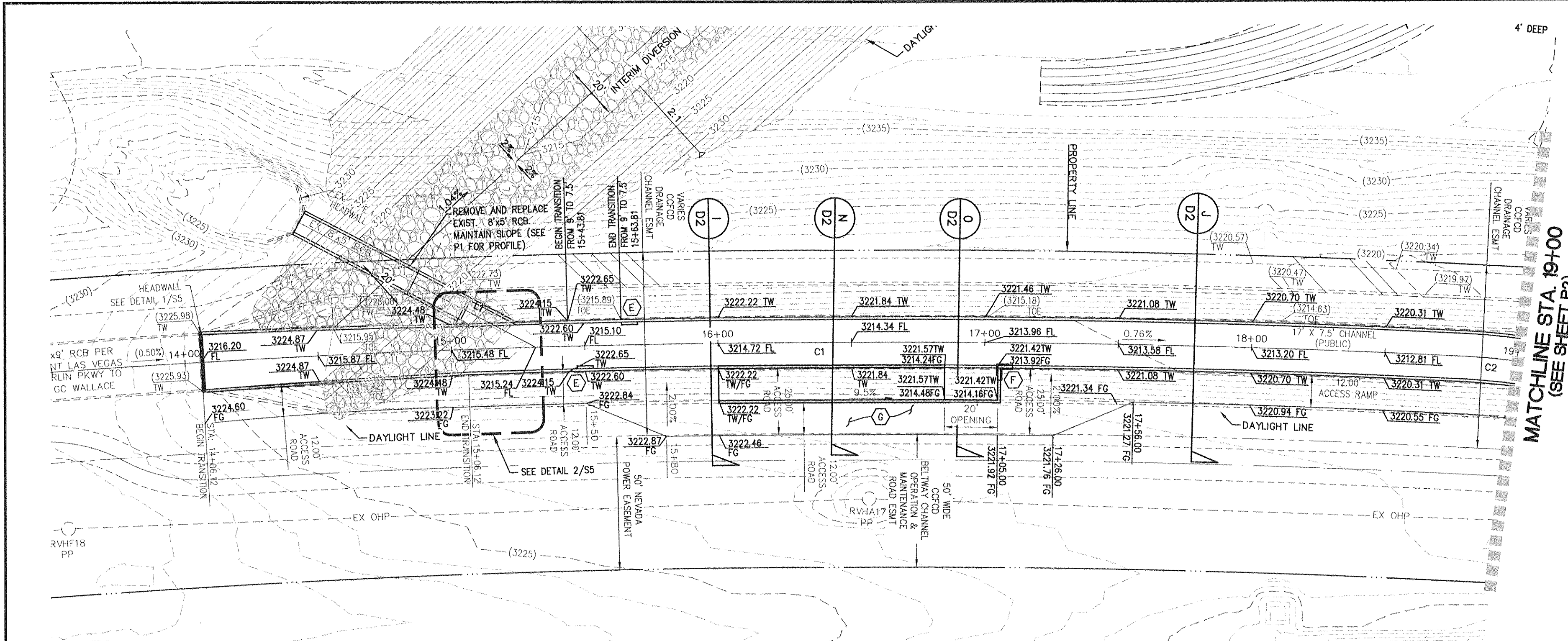
PROJECT NO.	DATE	ACEN APP	DATE	GCW APP	DATE	REV	DATE	DESCRIPTION
764-204-013								

DESIGN:	DATE: 03-17-16
DRAWN:	PLOT TIME: 14:19:35
CHECK:	

PROJECT NO. 764-204-013
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gowengineering.com
F:\PROJECTS\700\764-204-013\DWG\PRODUCTION\05 DRAINAGE\01303.DWG
HAO NGUYEN

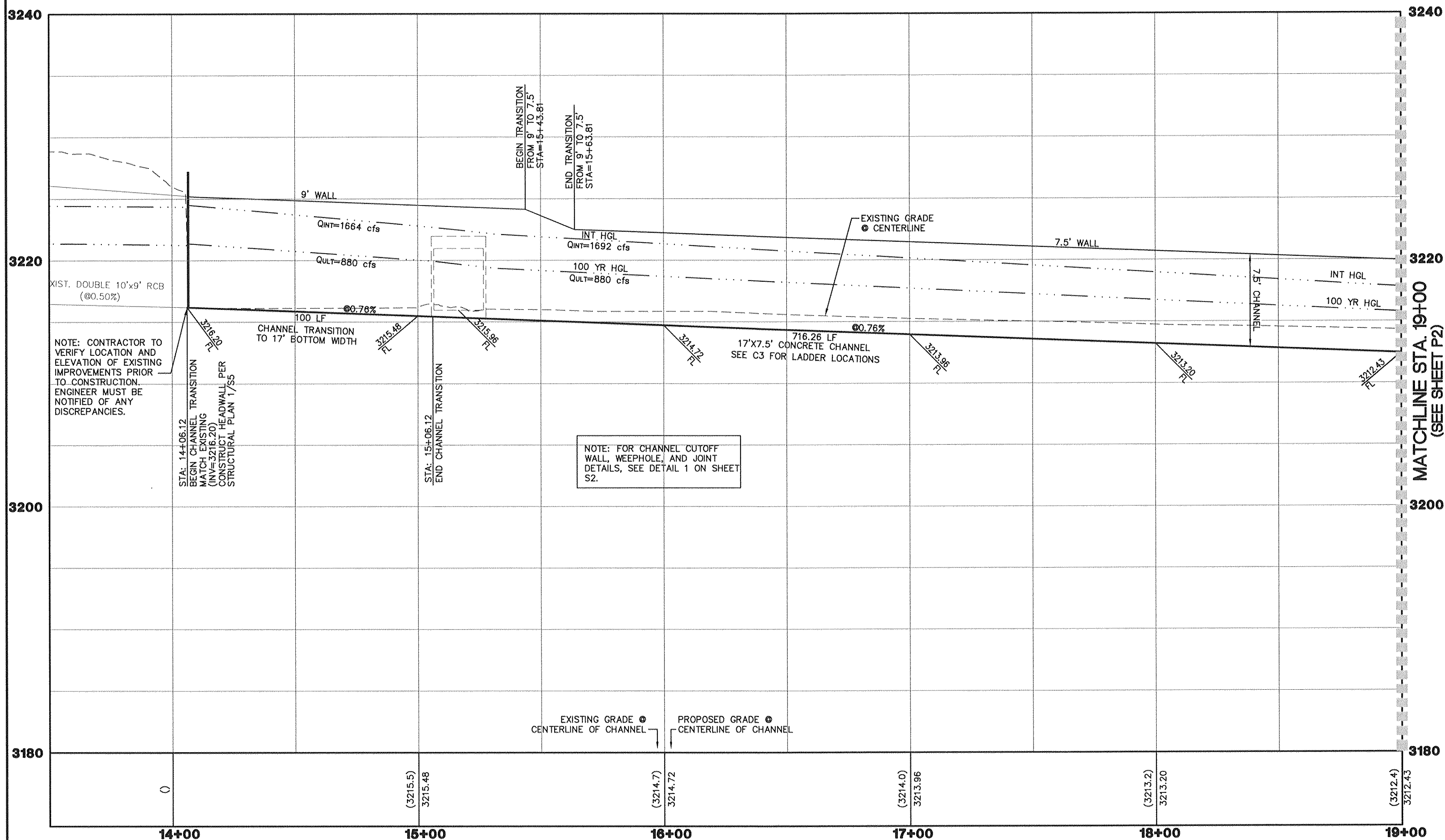
PULTE HOMES	GRADING PLAN XV
SUMMERLIN VILLAGE 26 - REFERENCE OFFSITE DRAINAGE IMPROVEMENTS	
DRAWING G14	18 OF 87 SHITS

% COMPLETE



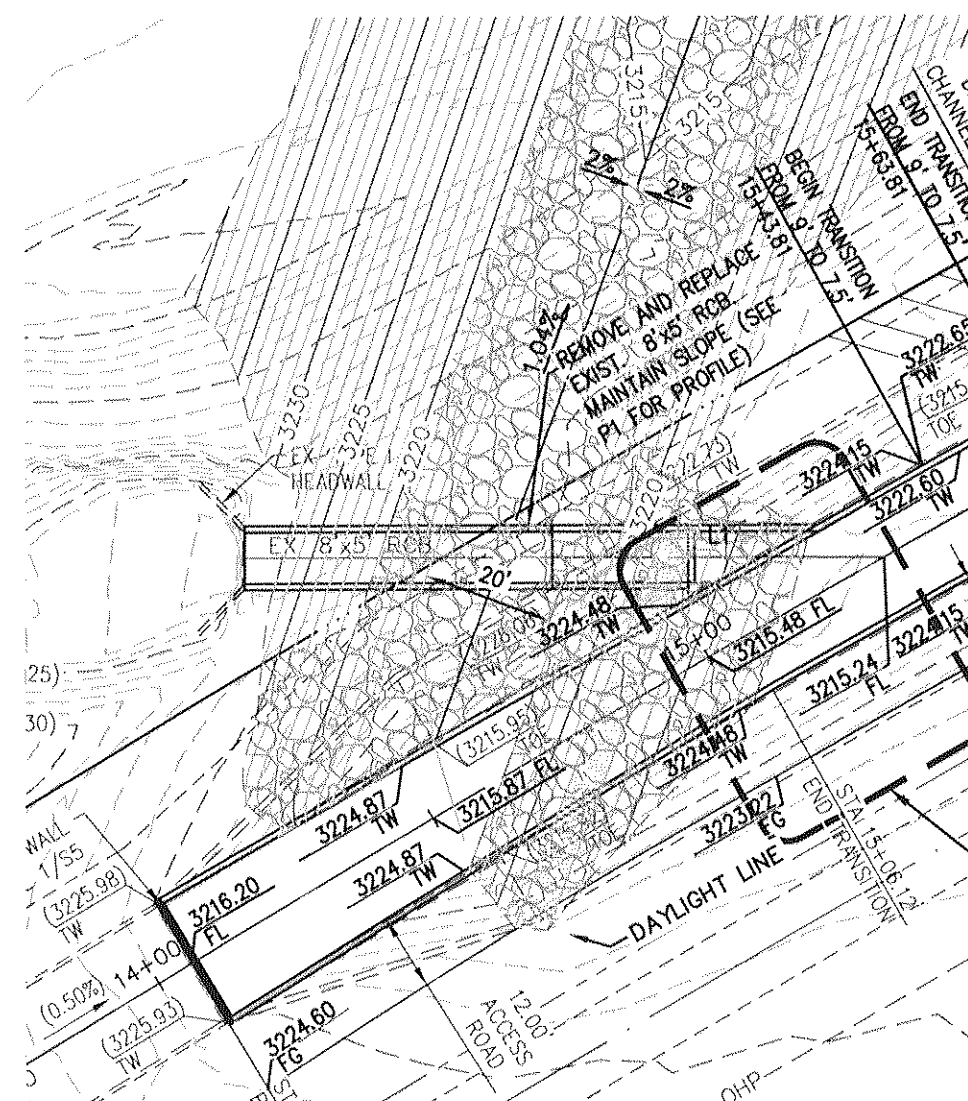
17' X 9' / 17' X 7.5' RECTANGULAR CHANNEL (RIGHT CHANNEL)

(PUBLIC)
SCALE: 1"=30'



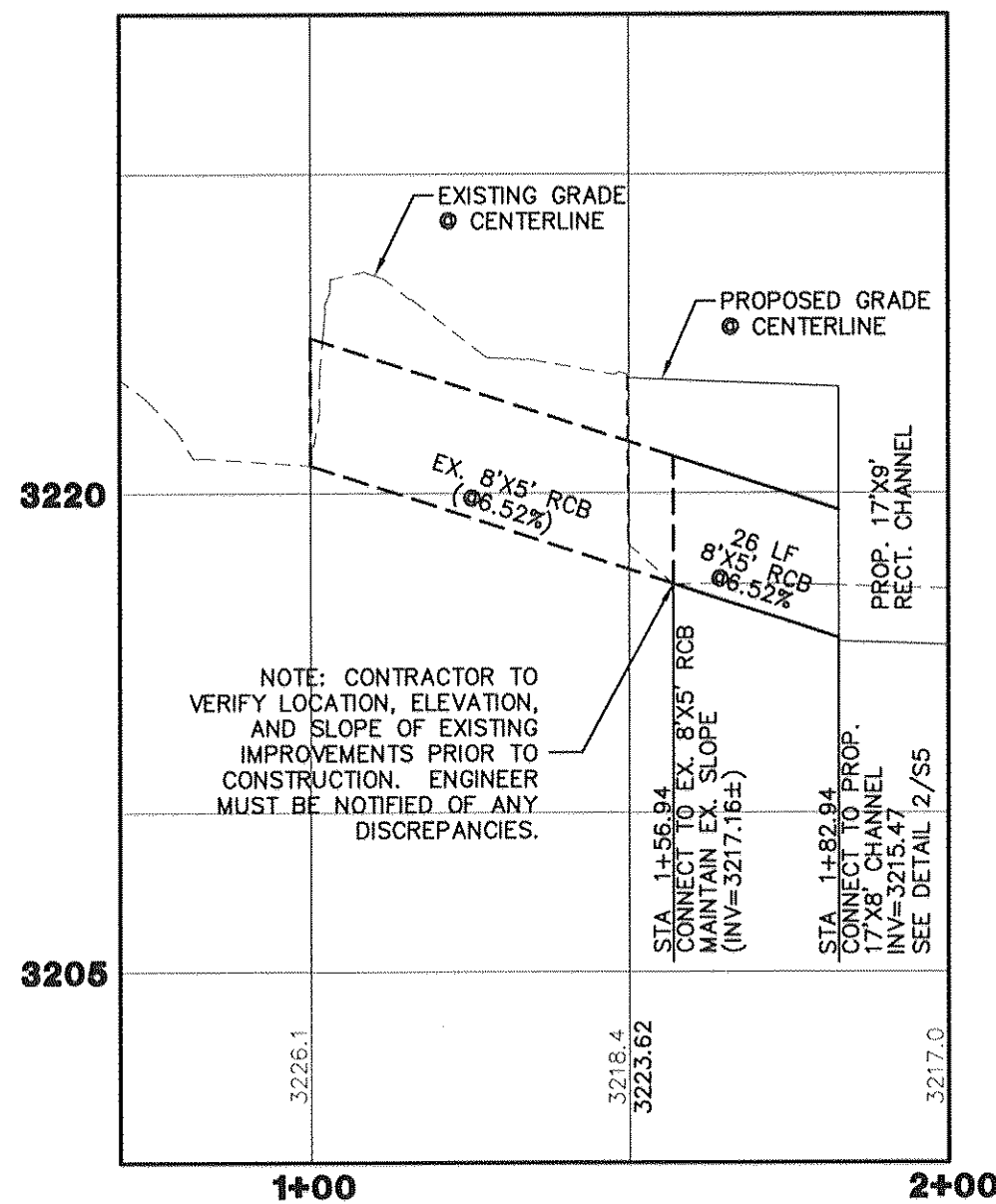
PROFILE

SCALE
HORIZ. 1" = 30'
VERT. 1" = 6'



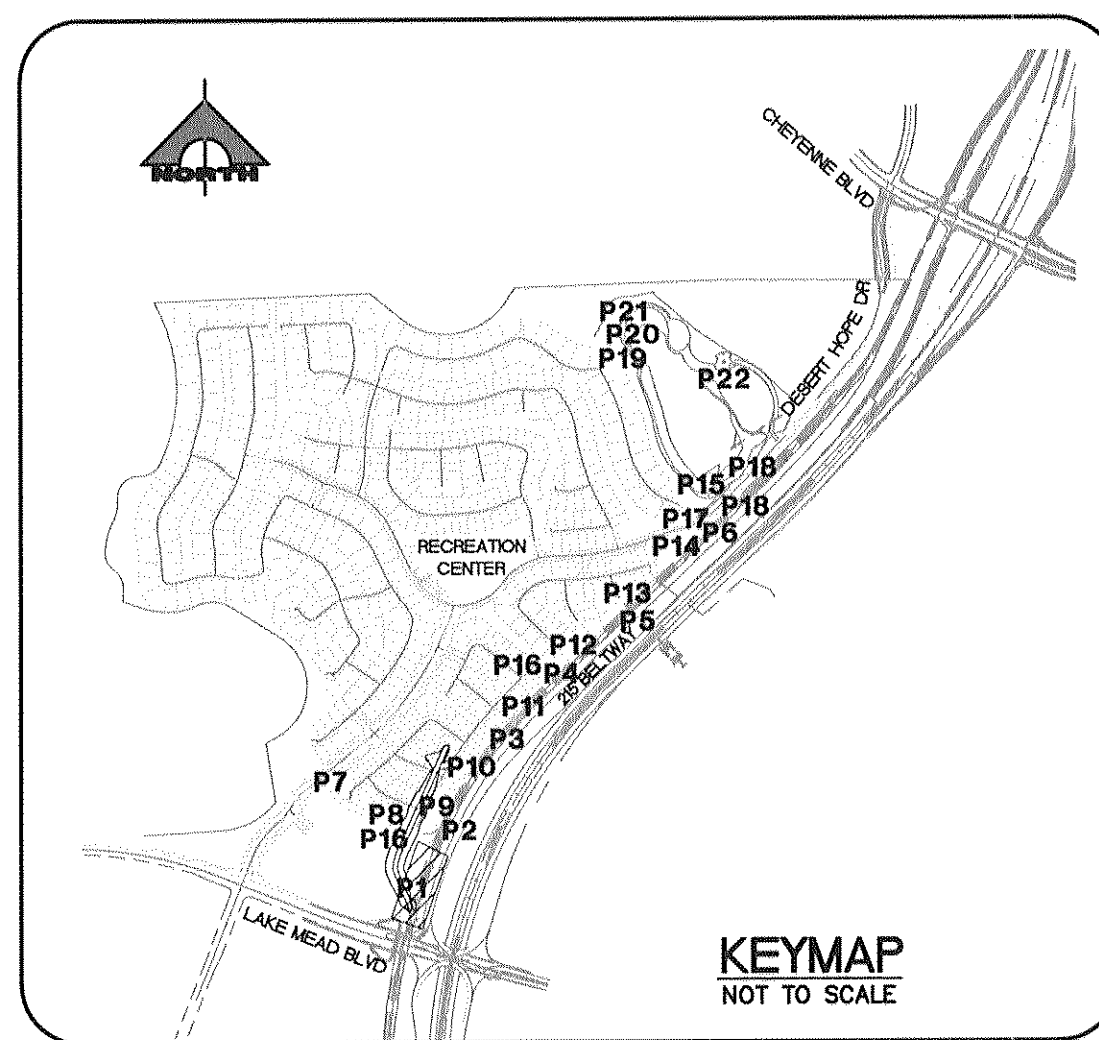
8'X5' RCB

(PUBLIC)
SCALE: 1"=30'

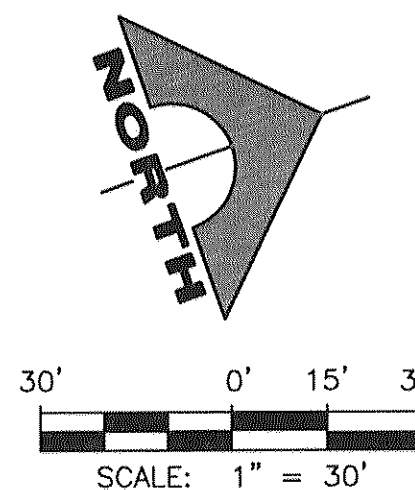


PROFILE

SCALE
HORIZ. 1" = 30'
VERT. 1" = 6'



KEYMAP
NOT TO SCALE



LINE TABLE		
LINE	LENGTH	BEARING
L1	51.94'	N47° 05' 49.86"E

CURVE TABLE			
CURVE	RADIUS	LENGTH	DELTA
C1	4278.53'	474.17'	006°20'59"
C2	200.00'	14.16'	004°03'20"

STORM DRAIN NOTES:

- (A) CONSTRUCT 48" TYPE I MANHOLE PER USDOCA DWG NOL 403. SEE STRUCTURAL PLANS FOR BOX PENETRATION DETAIL.
- (B) CONSTRUCT 48" TYPE I MANHOLE PER USDOCA DWG NO. 403.1.
- (C) CONSTRUCT 48" TYPE II MANHOLE PER USDOCA DWG NO. 405.1.
- (D) CONSTRUCT 60" TYPE III MANHOLE PER USDOCA DWG NO. 406.1.
- (E) CONSTRUCT LADDER PER STRUCTURAL PLANS. SEE SHEET C3 FOR LOCATION TABLE.
- (F) CONSTRUCT SPLASH GUARD AT CHANNEL ACCESS RAMP WALL PER STRUCTURAL PLANS.
- (G) CONSTRUCT 2" AC PAVEMENT OVER 4" TYPE II AB.
- (H) CONSTRUCT 2" CRUSHED GRAVEL OVER 4" TYPE II 95% COMPACTION FOR H2O DRIVABLE SURFACE.

NOTE TO CONTRACTOR

CONTRACTOR TO VERIFY ALL EXISTING SEWER, STORM DRAIN, & WATER SIZES, INVERTS AND LOCATIONS. IF A DISCREPANCY EXISTS, CONTRACTOR TO NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION.

BASIS OF BEARING

SOUTH 89°39'55" EAST, BEING THE BEARING OF THE NORTH LINE OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 13, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., AS SHOWN BY MAP THEREOF ON FILE IN FILE 91, PAGE 28 OF PARCEL MAPS IN THE CLARK COUNTY RECORDER'S OFFICE, CLARK COUNTY, NEVADA.

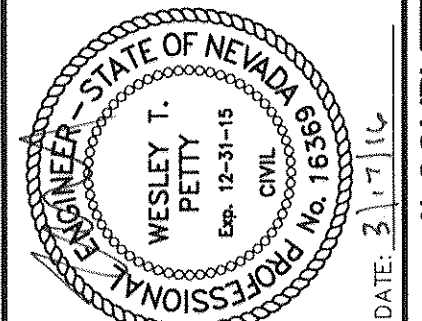
BENCHMARK

CITY OF LAS VEGAS BENCHMARK #0368 3
USC&GS DISC SET IN ROCK EAST OF CHARLESTON SOUTH OF DETENTION BASIN
ELEV (NAVD 88) = 989.5990 METERS
3246.71 U.S. SURVEY FEET
SUMMERLIN WEST: C.V. NAVD 88/93
ELEV = 989.5703 METERS
3246.62 U.S. SURVEY FEET



NOTE:

ALL EXISTING UTILITIES SHOWN FOR GRAPHICAL PURPOSES ONLY. CONTRACTOR RESPONSIBLE FOR UTILITY LOCATE AND VERIFICATION. ENGINEER MUST BE NOTIFIED OF ANY DISCREPANCIES.



DATE	3/1/17	DATE	3/1/17	DATE	3/1/17
DESIGN		DESIGN		DESIGN	
DRAWN		DRAWN		DRAWN	
CHECK		CHECK		CHECK	
DATE		DATE		DATE	
REV		REV		REV	

PROJECT NO.
764-204-03

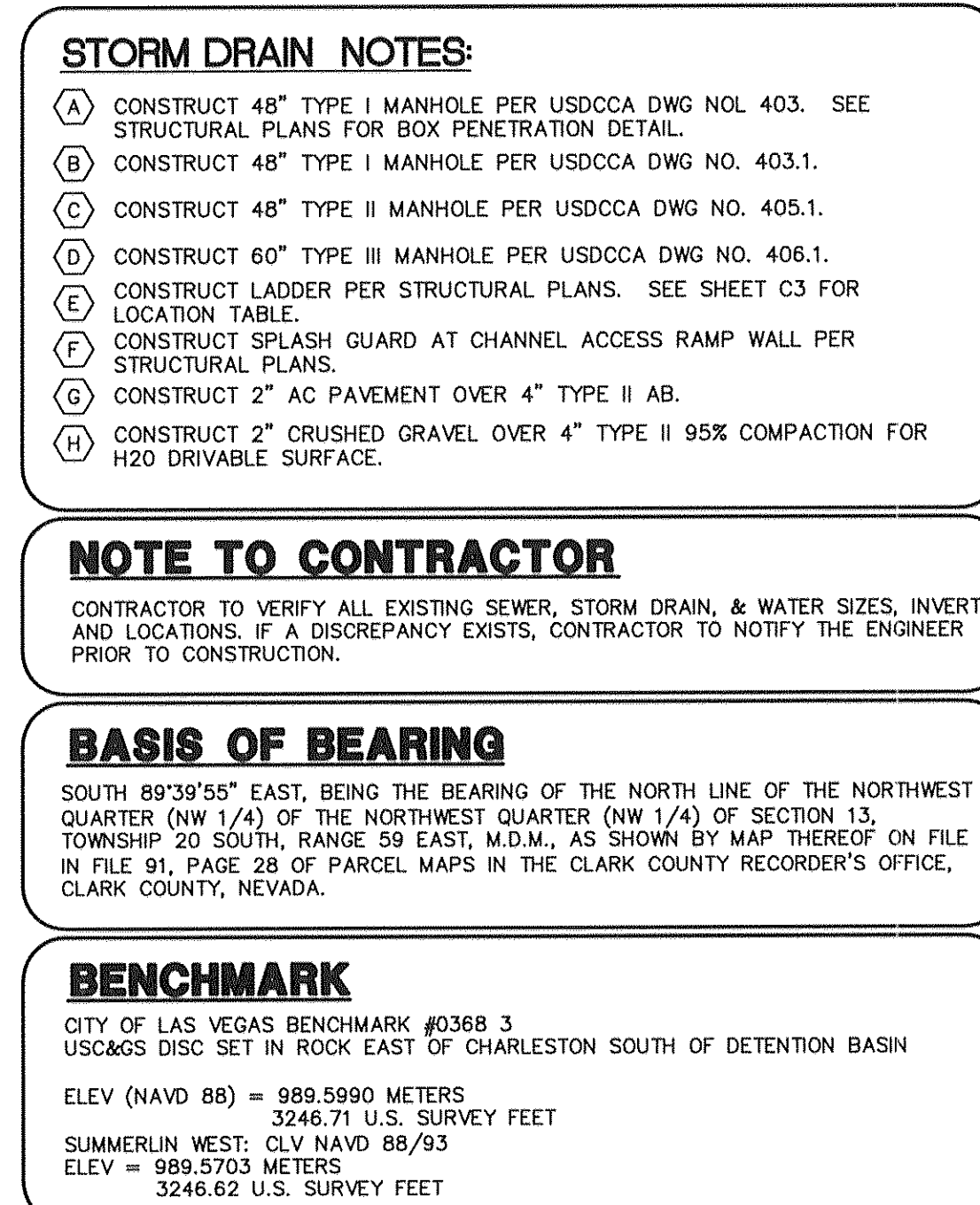
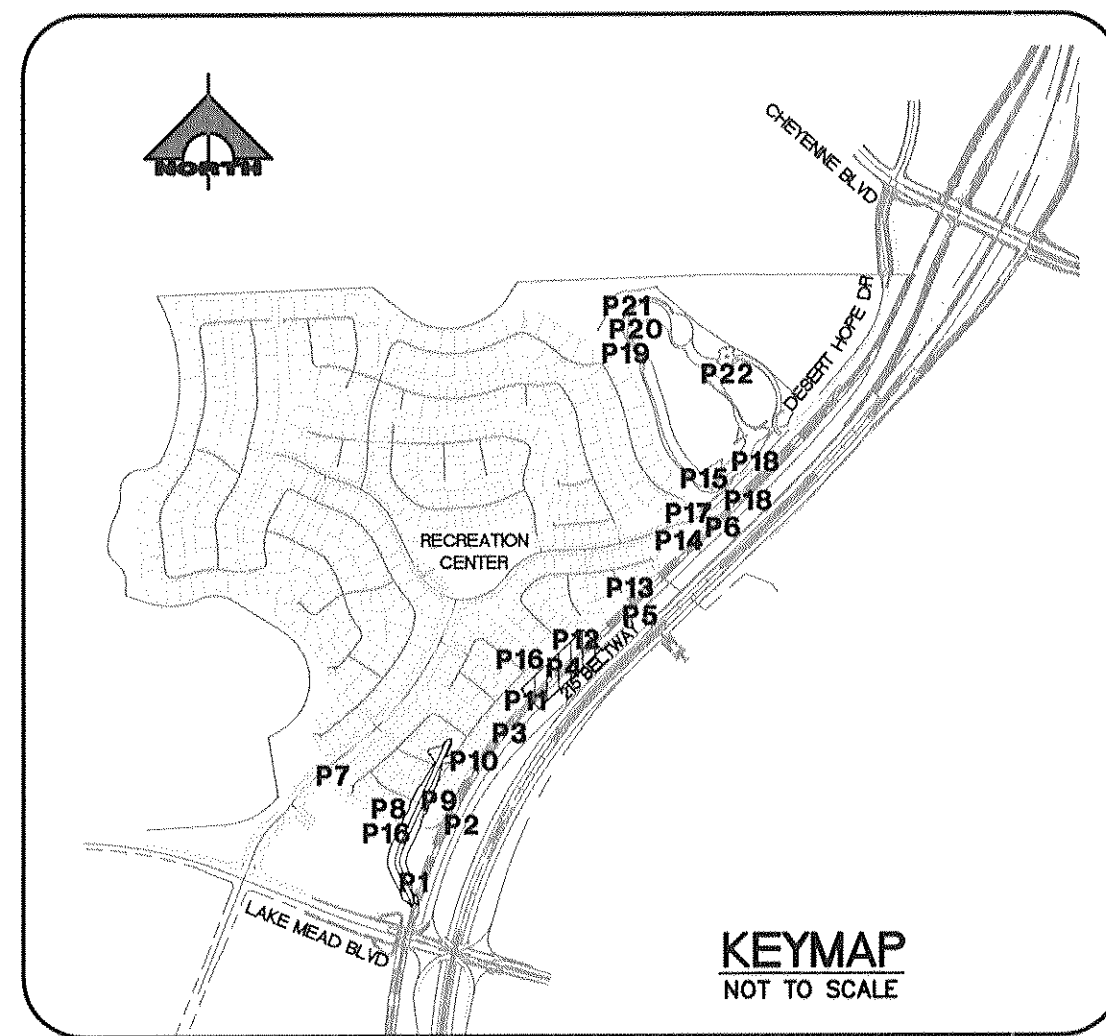
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gowengineering.com

GCV
ENGINEERS & SURVEYORS
PHO NGUYEN

PULTE HOMES
SUMMERLIN VILLAGE 26 - REVERENCE
OFFSITE DRAINAGE IMPROVEMENTS
STORM CHANNEL PLAN AND PROFILE - STA 18+50 TO STA 19+00
8'X5' RCB PLAN AND PROFILE

DRAWING
P1
19 OF 87 SHTS

100% COMPLETE



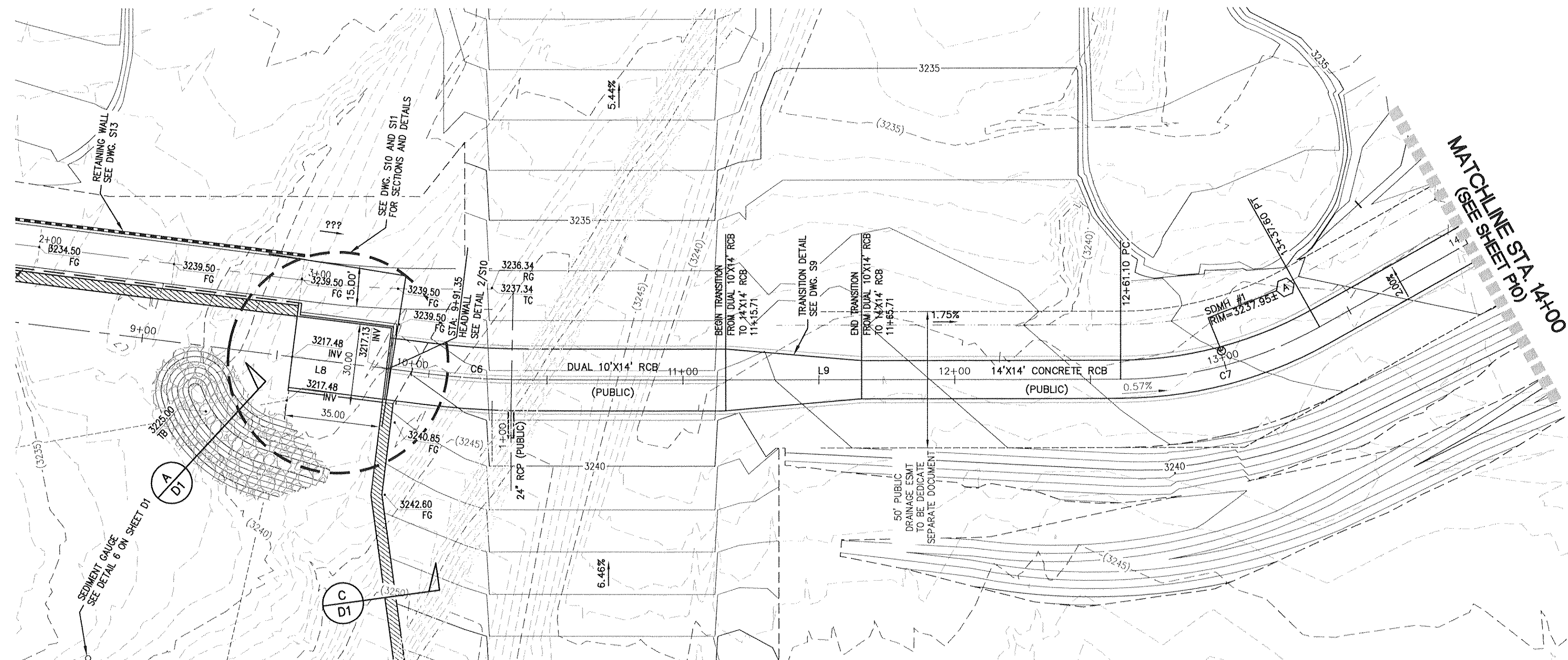
NOTE:
ALL EXISTING UTILITIES SHOWN FOR GRAPHICAL PURPOSES ONLY, CONTRACTOR RESPONSIBLE FOR UTILITY LOCATE AND VERIFICATION ENGINEER MUST BE NOTIFIED OF ANY DISCREPANCIES.

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call

OR
1-800-227-2600

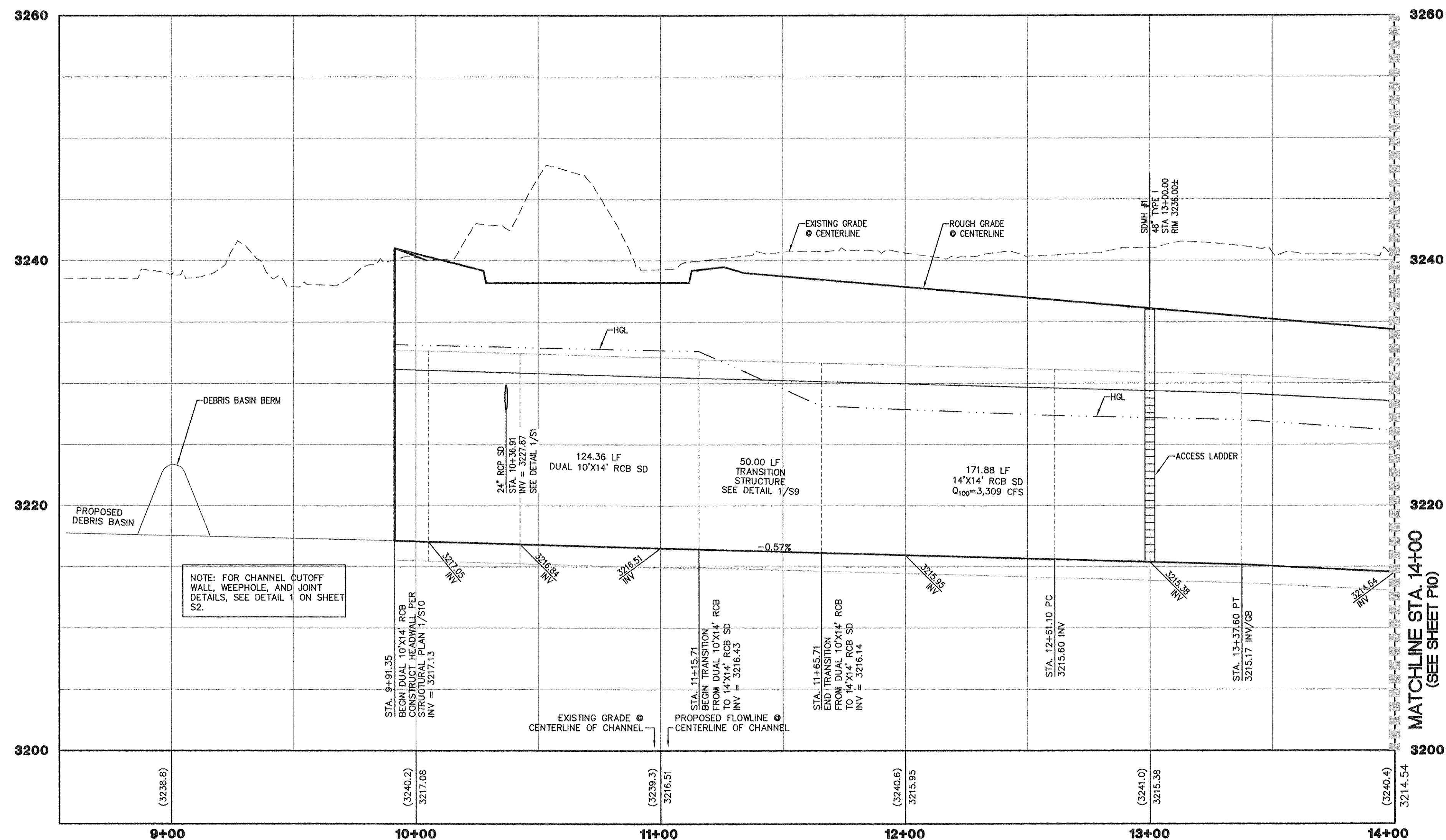
FAST
Call before you
UnderGround
1-702-432-5300
FREEWAY AND ARTERIAL

H# _____ CLV DWG# _____



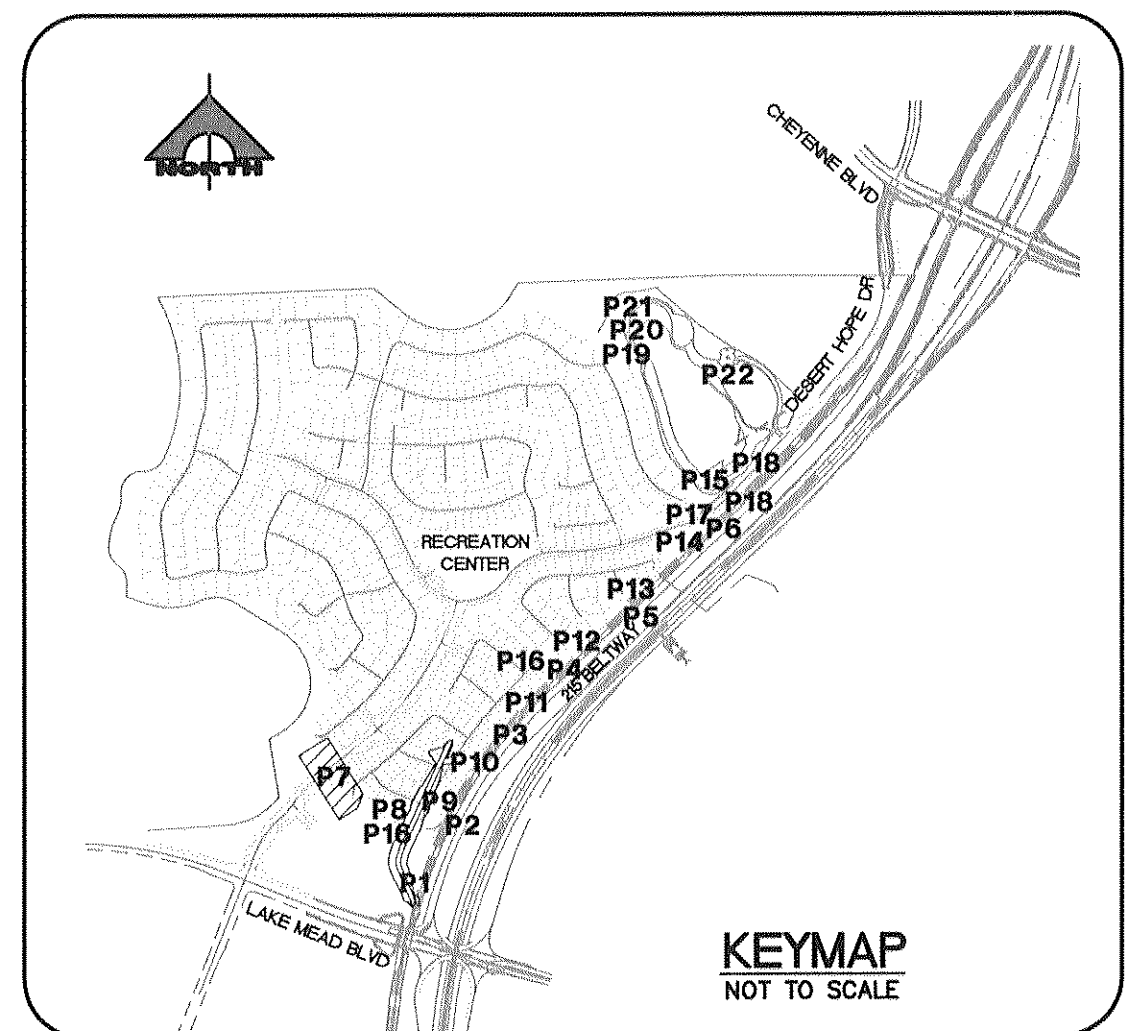
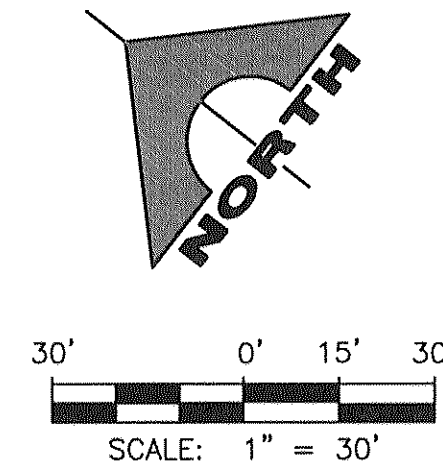
14' X 14' RCB STORM DRAIN

(PUBLIC)
SCALE: 1"=30'



PROFILE

SCALE
HORIZ. 1" = 30'
VERT. 1" = 6'



LINE TABLE		
LINE	LENGTH	BEARING
L8	49.45'	S30° 55' 54.03"E
L9	218.56'	S38° 04' 42.77"E

CURVE TABLE			
CURVE	RADIUS	LENGTH	DELTA
C6	300.00'	37.42'	007°08'49"
C7	150.00'	76.50'	029°13'14"

STORM DRAIN NOTES:

- | | |
|-----|--|
| (A) | CONSTRUCT 48" TYPE I MANHOLE PER USDOCCA DWG NOL 403. SEE STRUCTURAL PLANS FOR BOX PENETRATION DETAIL. |
| (B) | CONSTRUCT 48" TYPE I MANHOLE PER USDOCCA DWG NO. 403.1. |
| (C) | CONSTRUCT 48" TYPE II MANHOLE PER USDOCCA DWG NO. 405.1. |
| (D) | CONSTRUCT 60" TYPE III MANHOLE PER USDOCCA DWG NO. 406.1. |
| (E) | CONSTRUCT LADDER PER STRUCTURAL PLANS. SEE SHEET C3 FOR LOCATION TABLE. |
| (F) | CONSTRUCT SPLASH GUARD AT CHANNEL ACCESS RAMP WALL PER STRUCTURAL PLANS. |
| (G) | CONSTRUCT 2" AC PAVEMENT OVER 4" TYPE II AB. |
| (H) | CONSTRUCT 2" CRUSHED GRAVEL OVER 4" TYPE II 95% COMPACTION FOR H20 DRIVABLE SURFACE. |

NOTE TO CONTRACTOR

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BASIS OF BEARING

SOUTH 89°39'55" EAST, BEING THE BEARING OF THE NORTH LINE OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 13, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., AS SHOWN BY MAP THEREOF ON FILE IN FILE 91, PAGE 28 OF PARCEL MAPS IN THE CLARK COUNTY RECORDER'S OFFICE, CLARK COUNTY, NEBADA.

BENCHMARK

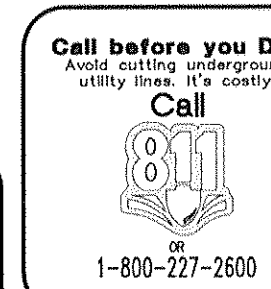
CITY OF LAS VEGAS BENCHMARK #0368 3
USC&GS DISC SET IN ROCK EAST OF CHARLESTON SOUTH OF DETENTION BASIN

ELEV (NAVD 88) = 989.5990 METERS
3246.71 U.S. SURVEY FEET

SUMMERLIN WEST: CLV NAVD 88/93
ELEV = 989.5703 METERS
3246.62 U.S. SURVEY FEET

NOTE:

ALL EXISTING UTILITIES SHOWN FOR GRAPHICAL PURPOSES ONLY, CONTRACTOR RESPONSIBLE FOR UTILITY LOCATE AND VERIFICATION ENGINEER MUST BE NOTIFIED OF ANY DISCREPANCIES.

[illegible]

DATE: 3/11/16

% COMPLETE

[illegible]

PROJECT NO. 764-204-013

DESIGN:	HN
DRAWN:	
CHECK:	WP
PLOT DATE:	03-17-16
PLOT TIME:	14:17:40

GCV
ENGINEERS & SURVEYORS

1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcwengineering.com

F: PROJECTS 700/764-204-013 DWG PRODUCTION VS DRAINAGE/013P1 DWG
HAO NGUYEN

PULTE HOMES

SUMMERLIN VILLAGE 26 - REVERENCE
OFFSITE DRAINAGE IMPROVEMENTS

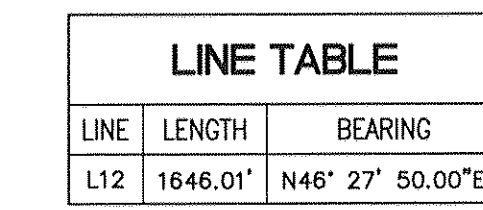
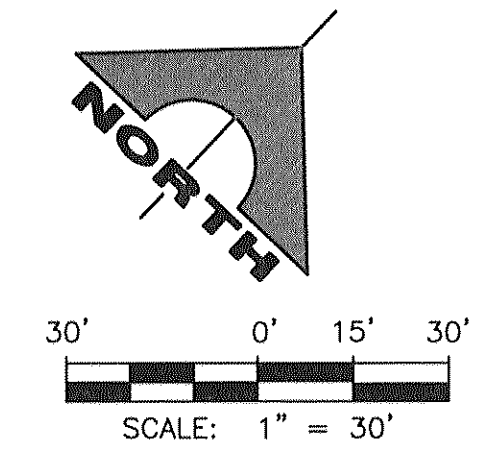
STORM DRAIN PLAN AND PROFILE
STA 8+00 TO STA 14+00

DRAWING

P7

25 OF 87 SHTS

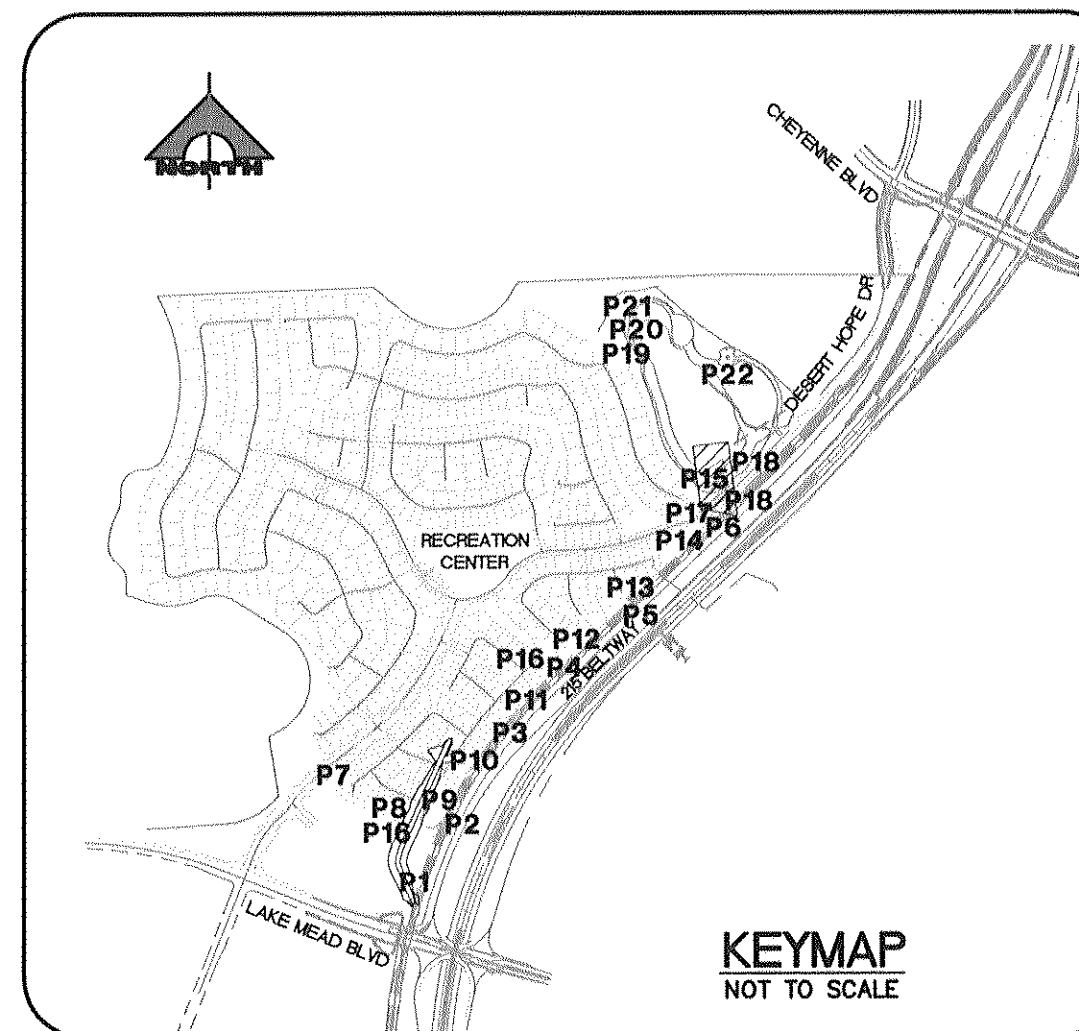
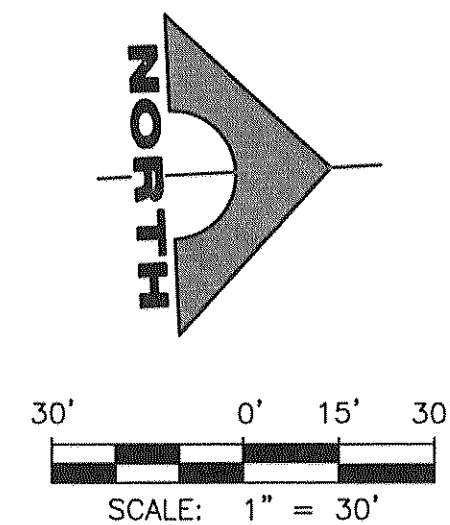
% COMPLETE



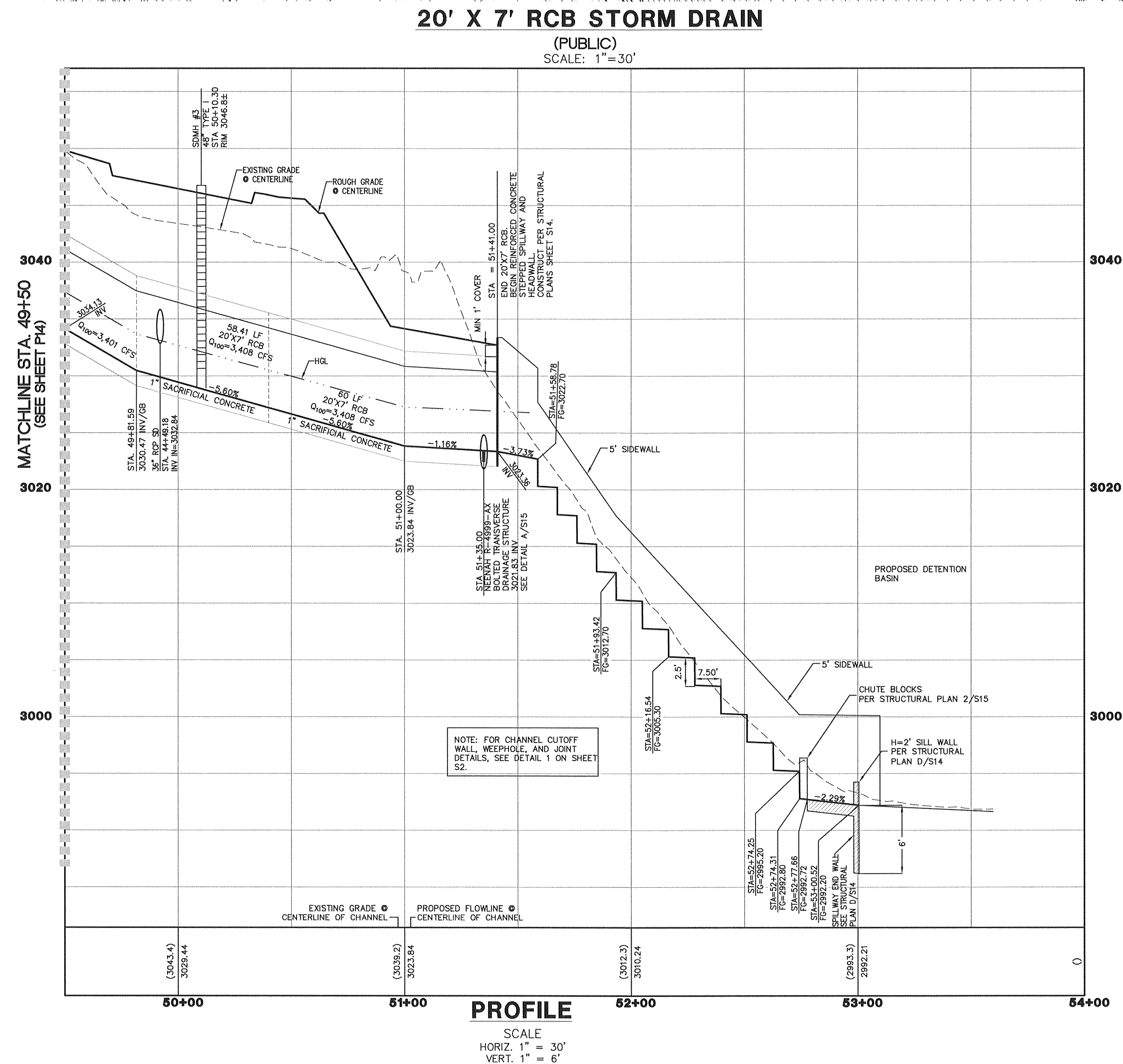
PROFILE

SCALE
HORIZ. 1" = 30'
VERT. 1" = 6'

NOTE:
ALL EXISTING UTILITIES SHOWN FOR GRAPHICAL PURPOSES ONLY, CONTRACTOR RESPONSIBLE FOR UTILITY LOCATE AND VERIFICATION ENGINEER MUST BE NOTIFIED OF ANY DISCREPANCIES.



LINE TABLE		
LINE	LENGTH	BEARING
L13	158.41'	N1° 50' 58.38"E



STORM DRAIN NOTES:

- | | |
|-----|--|
| (A) | CONSTRUCT 3" TYPE I MANHOLE PER USGCCA DWG NOL 403. SEE STRUCTURAL PLANS FOR BOX PENETRATION DETAIL. |
| (B) | CONSTRUCT 48" TYPE I MANHOLE PER USGCCA DWG NO. 403.1. |
| (C) | CONSTRUCT 48" TYPE II MANHOLE PER USGCCA DWG NO. 405.1. |
| (D) | CONSTRUCT 60" TYPE III MANHOLE PER USGCCA DWG NO. 406.1. |
| (E) | CONSTRUCT LADDER PER STRUCTURAL PLANS. SEE SHEET C3 FOR LOCATION TABLE. |
| (F) | CONSTRUCT SPLASH GUARD AT CHANNEL ACCESS RAMP WALL PER STRUCTURAL PLANS. |
| (G) | CONSTRUCT 2" AC PAVEMENT OVER 4" TYPE II AB. |
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BASIS OF BEARING

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BENCHMARK

CITY OF LAS VEGAS BENCHMARK #0368 3
USC&GS DISC SET IN ROCK EAST OF CHARLESTON SOUTH OF DETENTION BASIN

ELEV (NAVD 88) = 989.5990 METERS
3246.71 U.S. SURVEY FEET

SUMMERLIN WEST: CLV NAVD 88/93
ELEV = 989.5703 METERS
3246.62 U.S. SURVEY FEET

NOTE:

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H#

CLV DWG# _____

DATE: 3/7/16

[illegible]PROJECT NO.
764-204-013

DESIGN: HN
DRAWN:
CHECK: WP
PLOT DATE: 03-17-16

GCV'
ENGINEERS & SURVEYORS

1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcvengineering.com

\\PROJECTS\700\764-204-013\DWG\PRODUCTION\OS DRAINAGE\013CP1.DWG

PULTE HOMES

**SUMMERLIN VILLAGE 26 - REVERENCE
OFFSITE DRAINAGE IMPROVEMENTS**

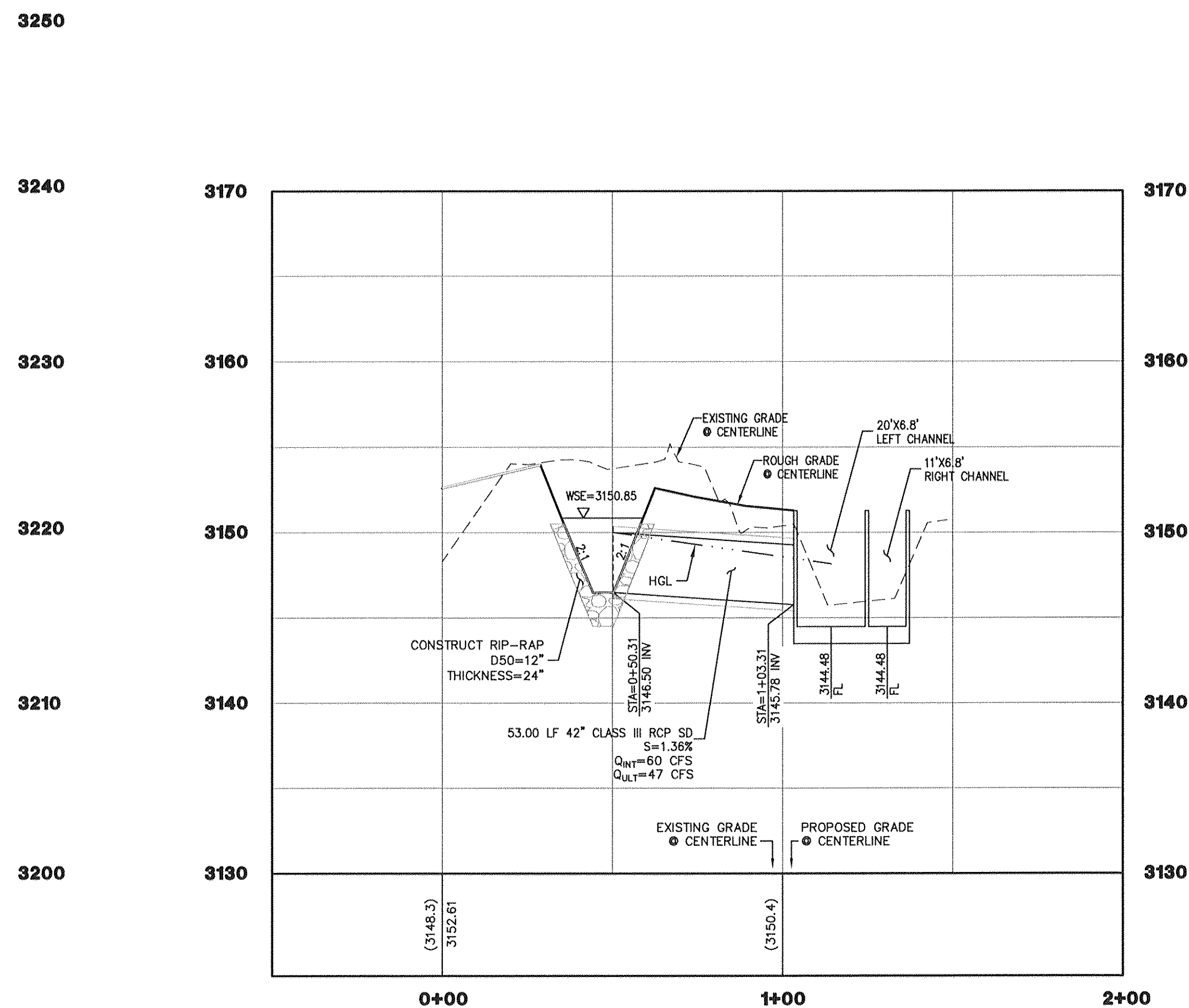
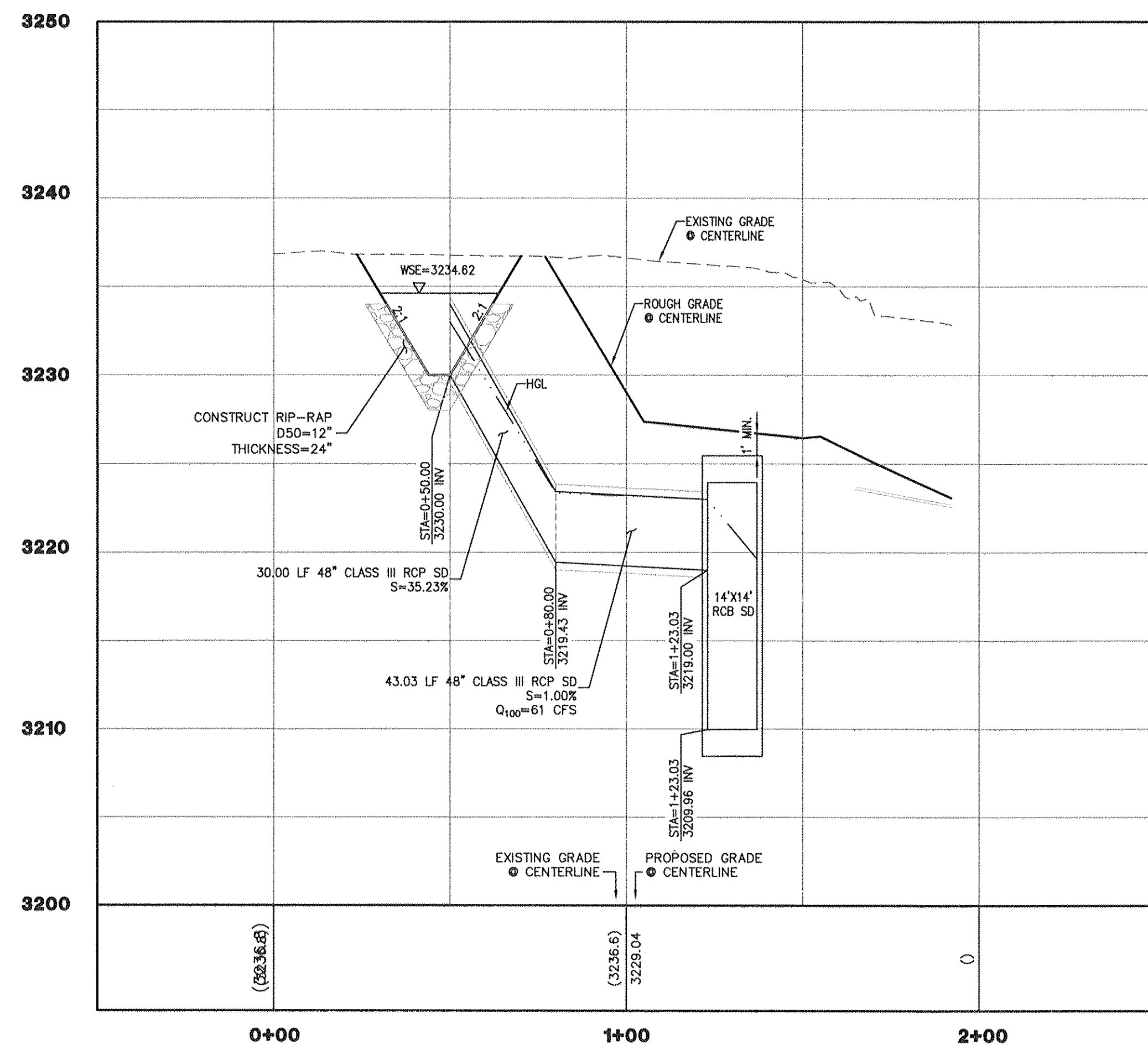
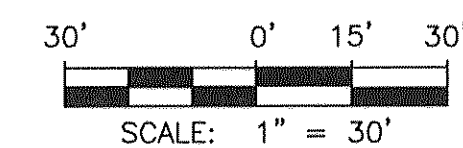
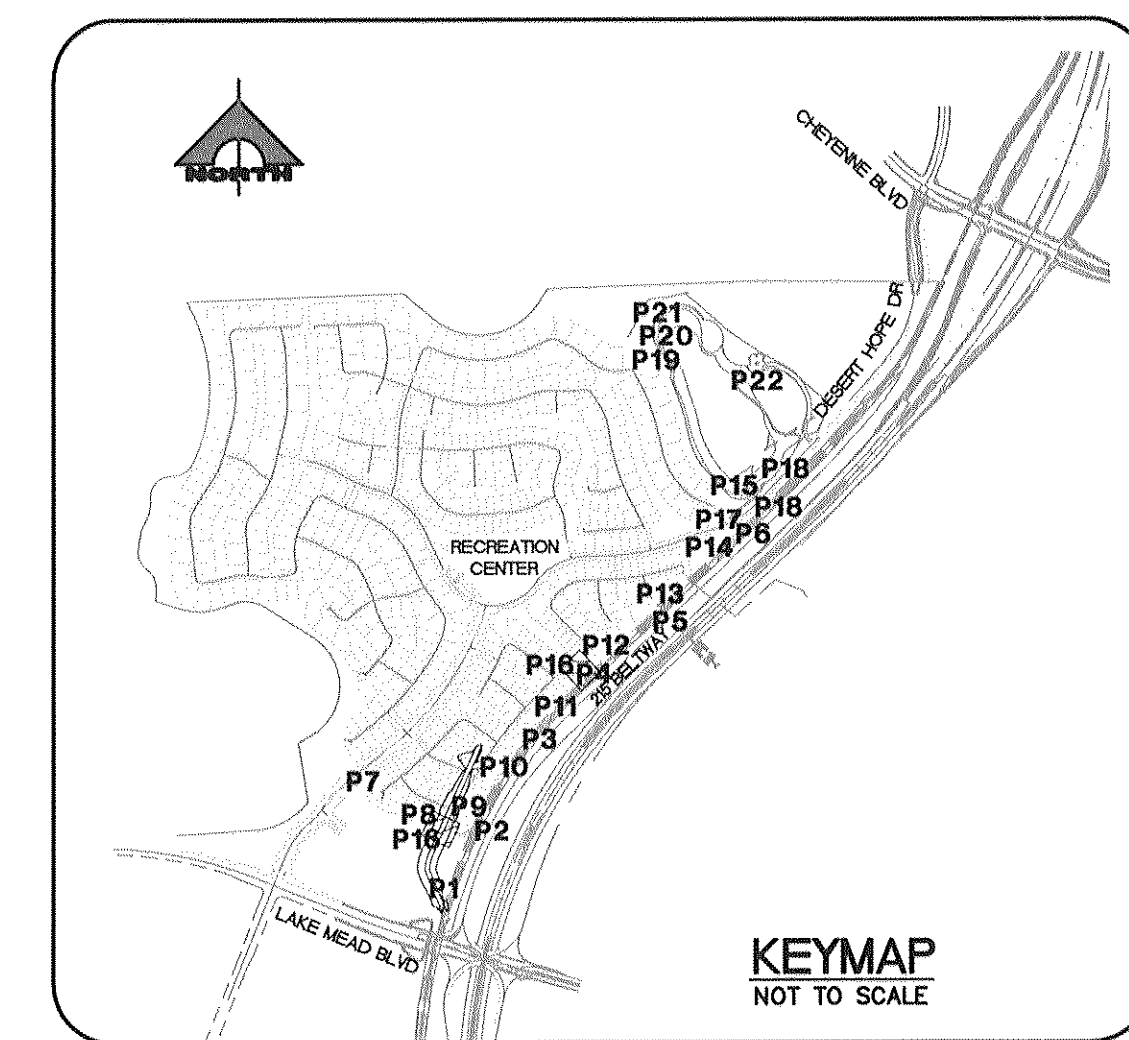
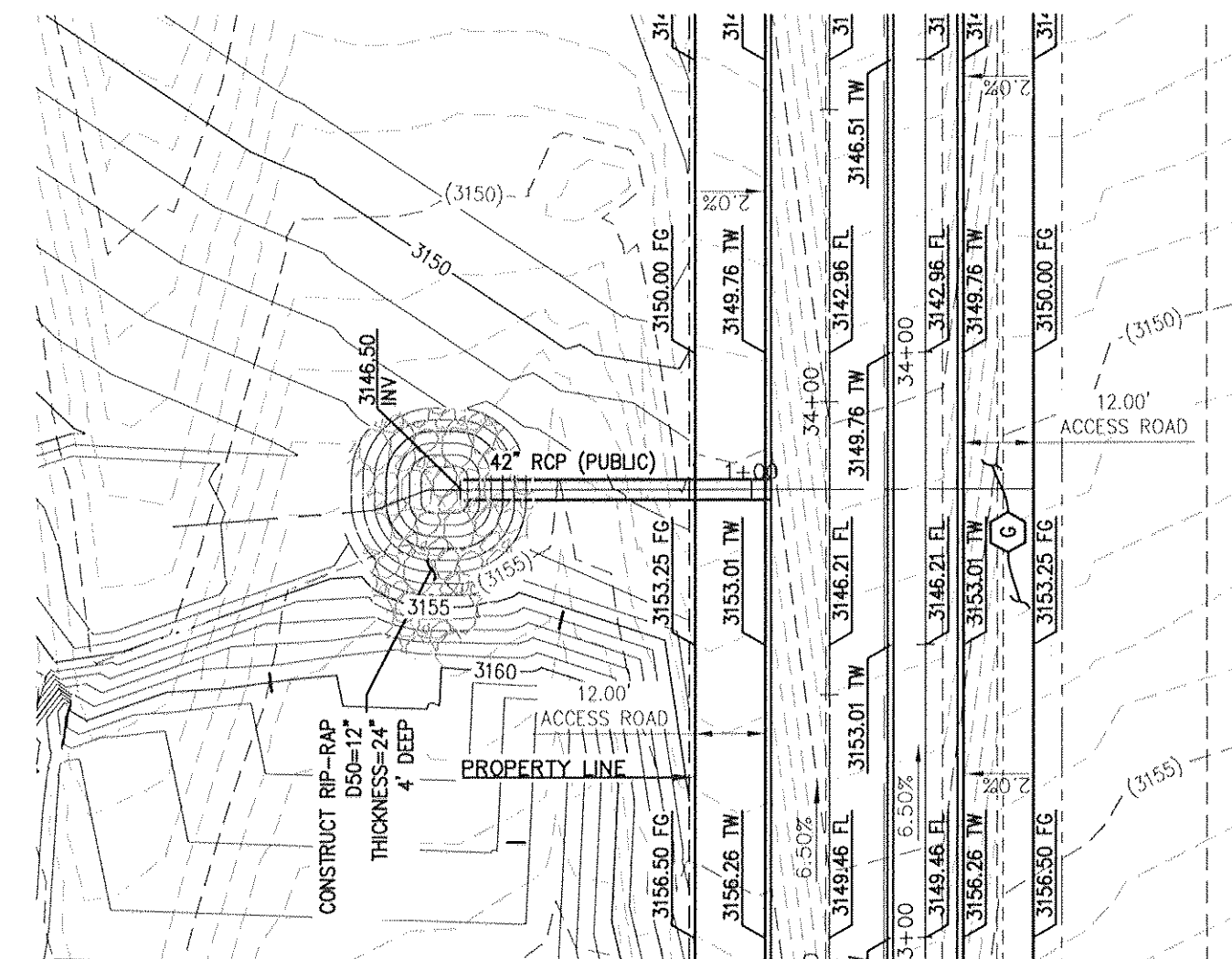
STORM DRAIN PLAN AND PROFILE
STA 49+50 TO STA 54+00

DRAWING

P15

33 OF 87 SHTS

[illegible]



STORM DRAIN NOTES:

- | | |
|---|---|
| A | CONSTRUCT "6" TYPE I MANHOLE PER USDFCC DWG NO. 403. SEE STRUCTURAL PLANS FOR BOX PENETRATION DETAIL. |
| B | CONSTRUCT 48" TYPE I MANHOLE PER USDFCC DWG NO. 403.1. |
| C | CONSTRUCT 48" TYPE II MANHOLE PER USDFCC DWG NO. 405.1. |
| D | CONSTRUCT 60" TYPE III MANHOLE PER USDFCC DWG NO. 406.1. |
| E | CONSTRUCT LADDER PER STRUCTURAL PLANS. SEE SHEET C3 FOR LOCATION TABLE. |
| F | CONSTRUCT SPLASH GUARD AT CHANNEL ACCESS RAMP WALL PER STRUCTURAL PLANS. |
| G | CONSTRUCT 2" AC PAVEMENT OVER 4" TYPE II AB. |
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BENCHMARK

CITY OF LAS VEGAS BENCHMARK #0368.3
USC&GS DISC SET IN ROCK EAST OF CHARLESTON SOUTH OF DETENTION BASIN

ELEV (NAVD 88) = 989.5990 METERS
3246.71 U.S. SURVEY FEET

SUMMERLIN WEST: CLV NAVD 88/93
ELEV = 989.5703 METERS
3246.62 U.S. SURVEY FEET

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Call before you dig
Avoid cutting underground utility lines. It's costly.
Call

OR
1-800-227-2600

FAST
Call before you
UnderGround
1-702-432-5300
FREEWAY AND ARTERIAL

AVOID HITTING OVERHEAD
POWER LINES. IT'S EASY TO

**CALL BEFORE
YOU DO
OVERHEAD**

1-702-227-2929

[illegible]

PROJECT NO.	HN
764-204-013	
DRAWN:	WP
CHECK:	
PLOT DATE: 03-17-16	
PLOT TIME: 14:15:19	

GCV'
ENGINEERS & SURVEYORS

1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcvengineering.com

PULTE HOMES

**SUMMERLIN VILLAGE 26 - REVERENCE
OFFSITE DRAINAGE IMPROVEMENTS**

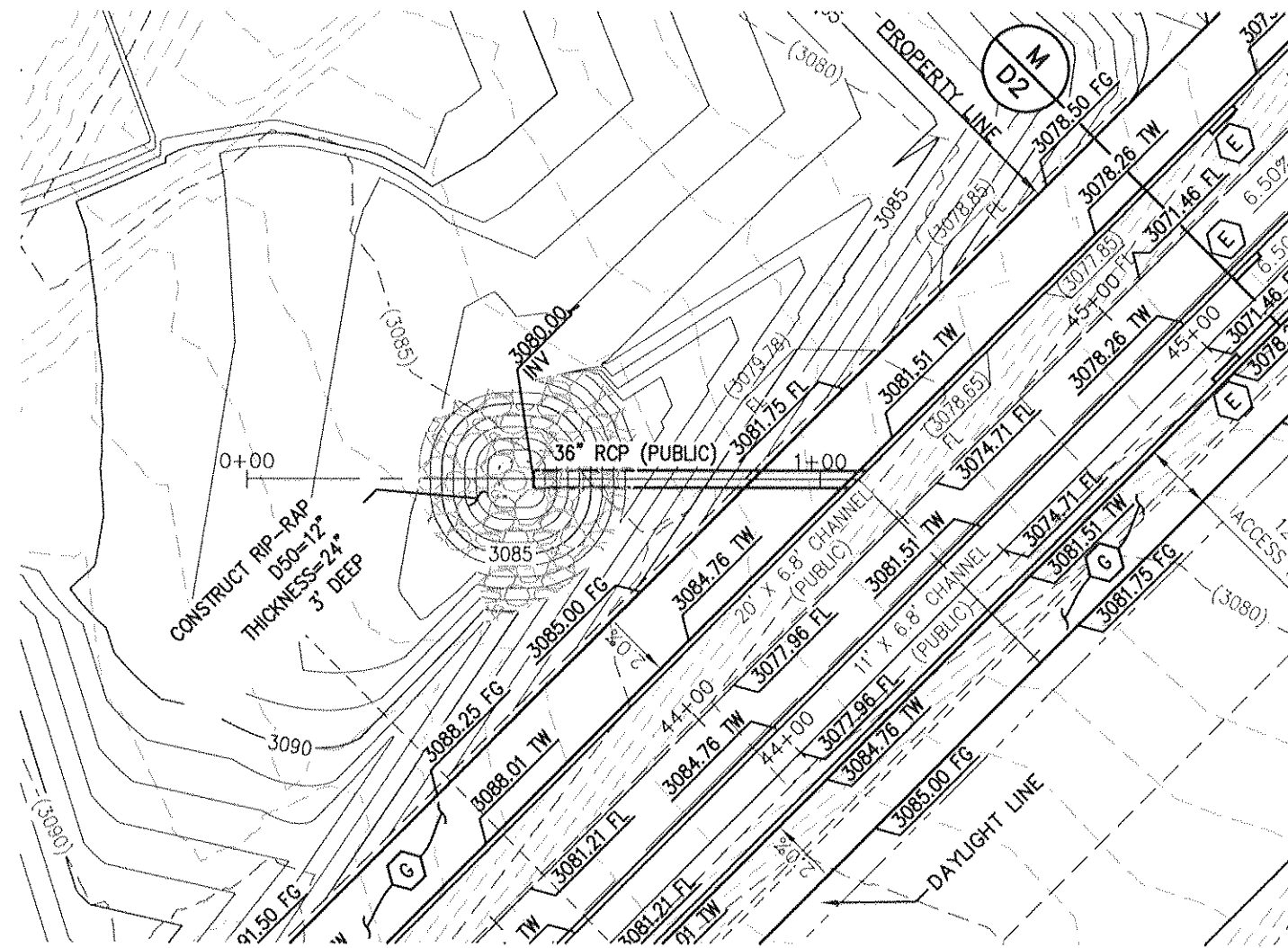
48' RCP LATERAL PLAN AND PROFILE - STA 18+50.20
42' RCP LATERAL PLAN AND PROFILE - STA 33+85.00

DRAWING

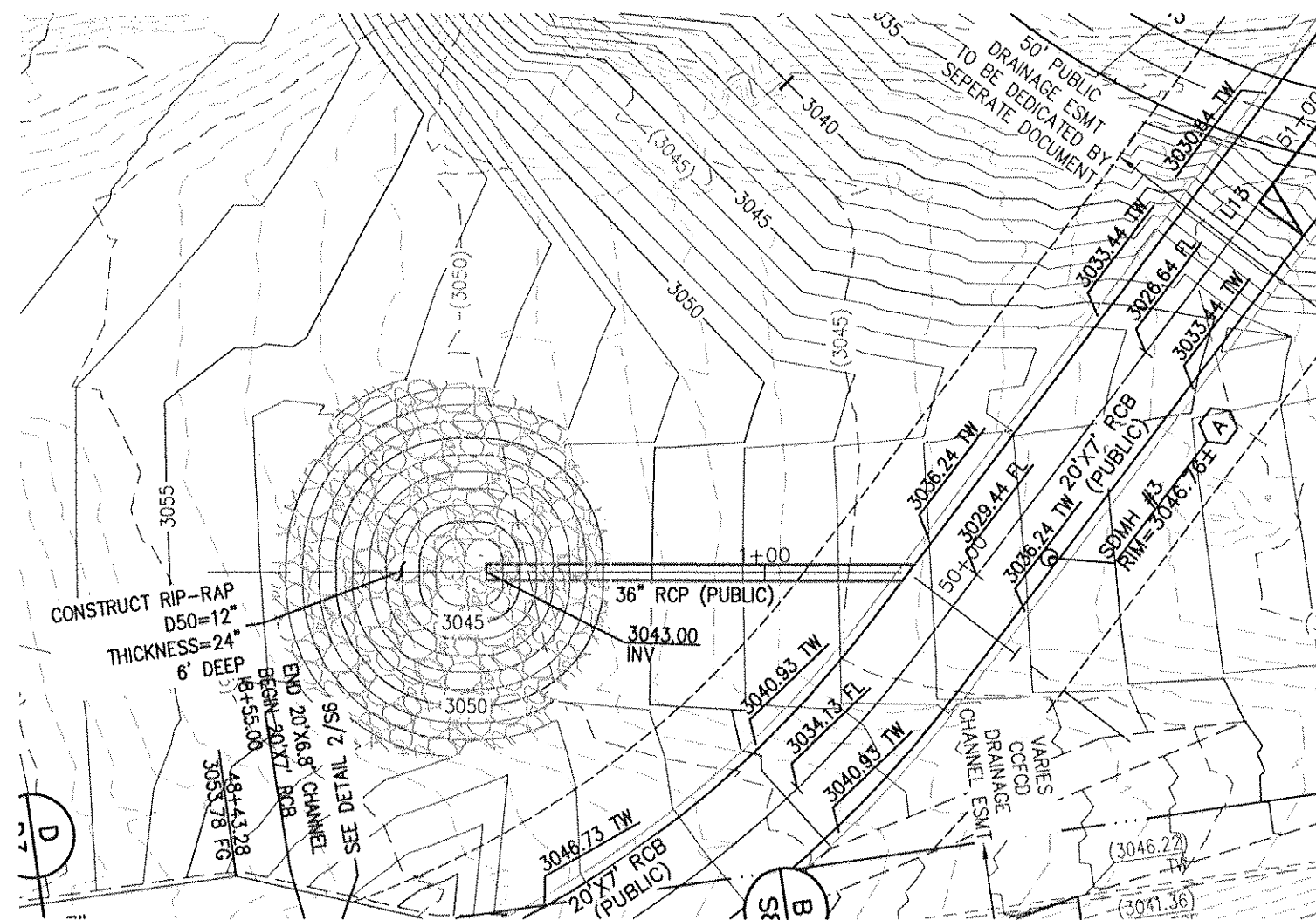
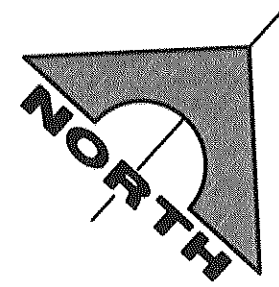
P16

34 OF 87 SHOTS

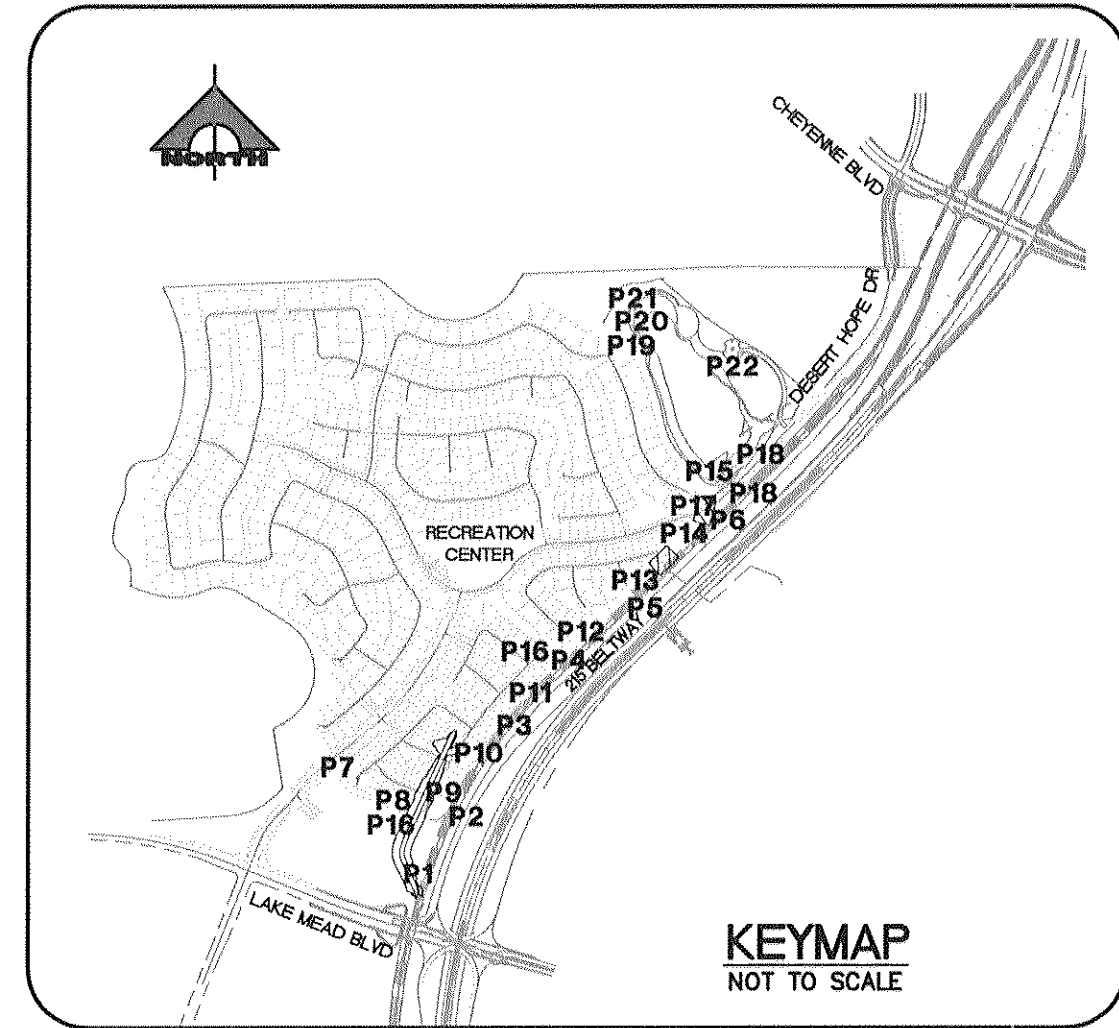
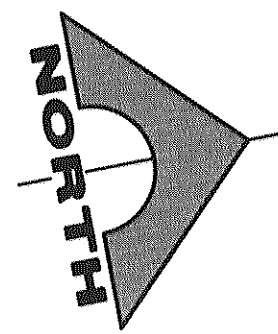
% COMPLETE



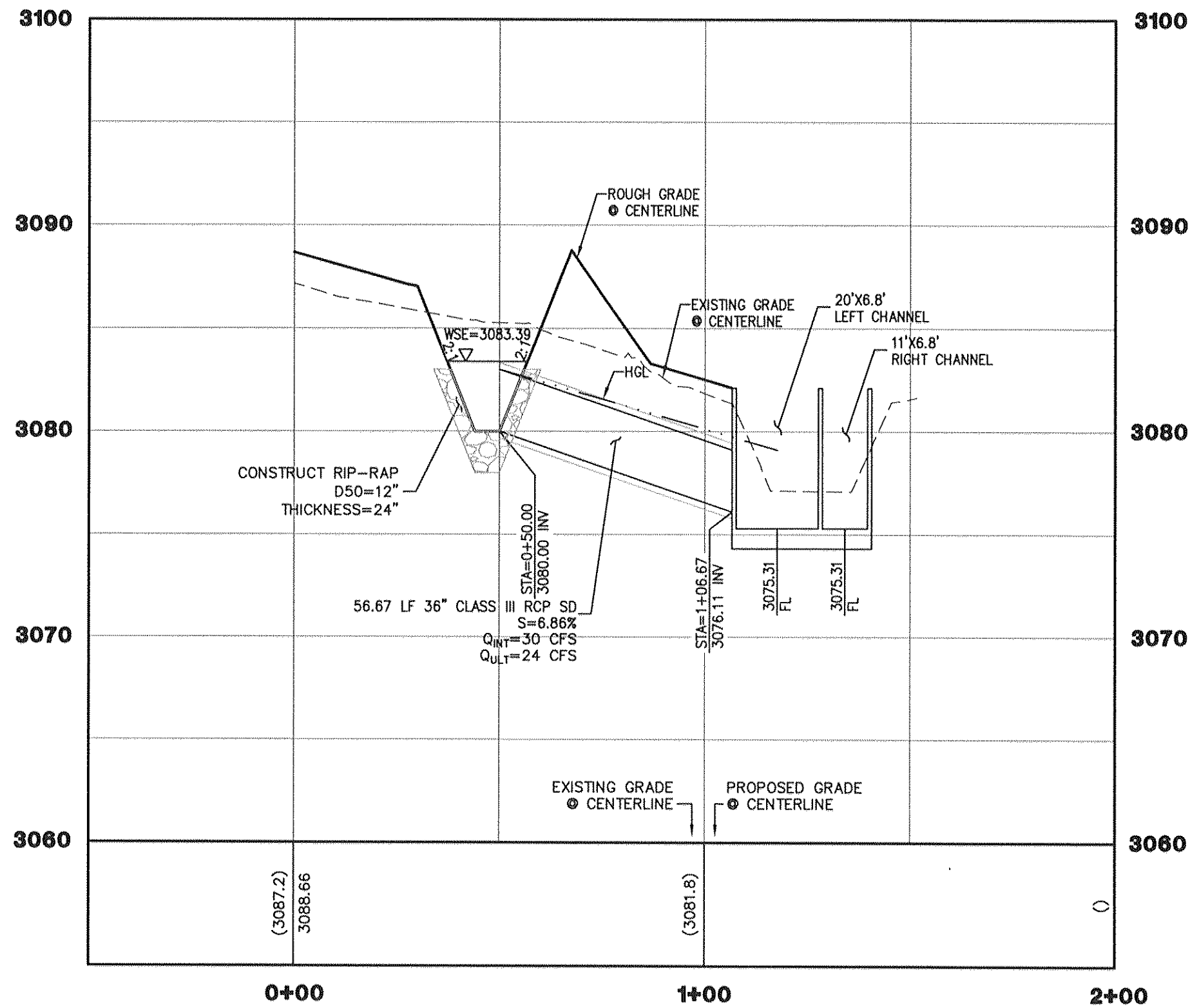
36" RCP LATERAL
STA. 44+49.18
(PUBLIC)
SCALE: 1"=30'



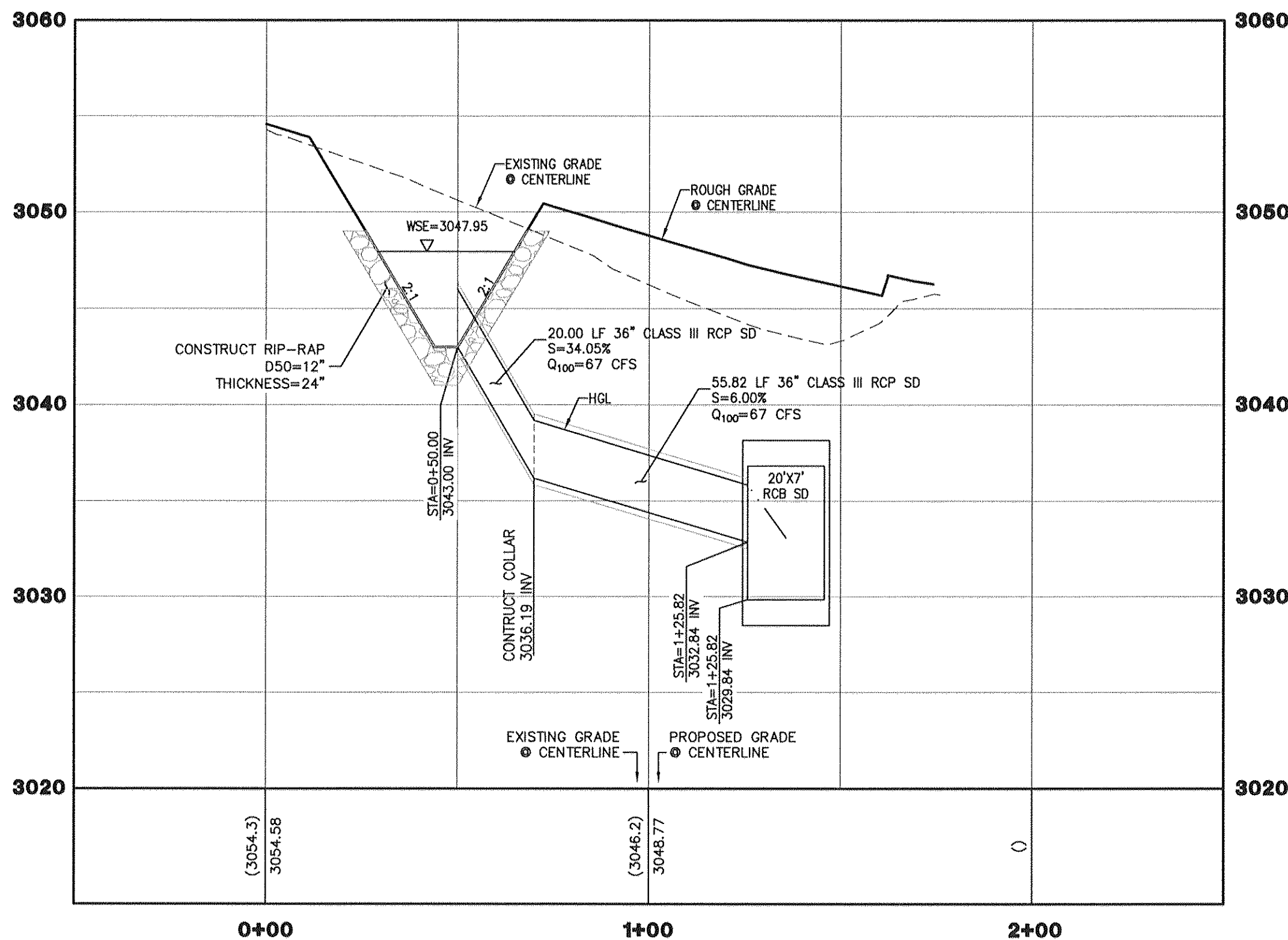
36" RCP LATERAL
STA. 49+92.04
(PUBLIC)
SCALE: 1"=30'



SCALE: 1" = 30'



PROFILE
SCALE
HORIZ. 1" = 30'
VERT. 1" = 6'



PROFILE
SCALE
HORIZ. 1" = 30'
VERT. 1" = 6'

- STORM DRAIN NOTES:**
- (A) CONSTRUCT 48" TYPE I MANHOLE PER USDOCA DWG NOL 403. SEE STRUCTURAL PLANS FOR BOX PENETRATION DETAIL.
 - (B) CONSTRUCT 48" TYPE I MANHOLE PER USDOCA DWG NO. 403.1.
 - (C) CONSTRUCT 48" TYPE II MANHOLE PER USDOCA DWG NO. 405.1.
 - (D) CONSTRUCT 60" TYPE III MANHOLE PER USDOCA DWG NO. 406.1.
 - (E) CONSTRUCT LADDER PER STRUCTURAL PLANS. SEE SHEET C3 FOR LOCATION TABLE.
 - (F) CONSTRUCT SPLASH GUARD AT CHANNEL ACCESS RAMP WALL PER STRUCTURAL PLANS.
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 - (H) CONSTRUCT 2" CRUSHED GRAVEL OVER 4" TYPE II 95% COMPACTION FOR H20 DRIVABLE SURFACE.

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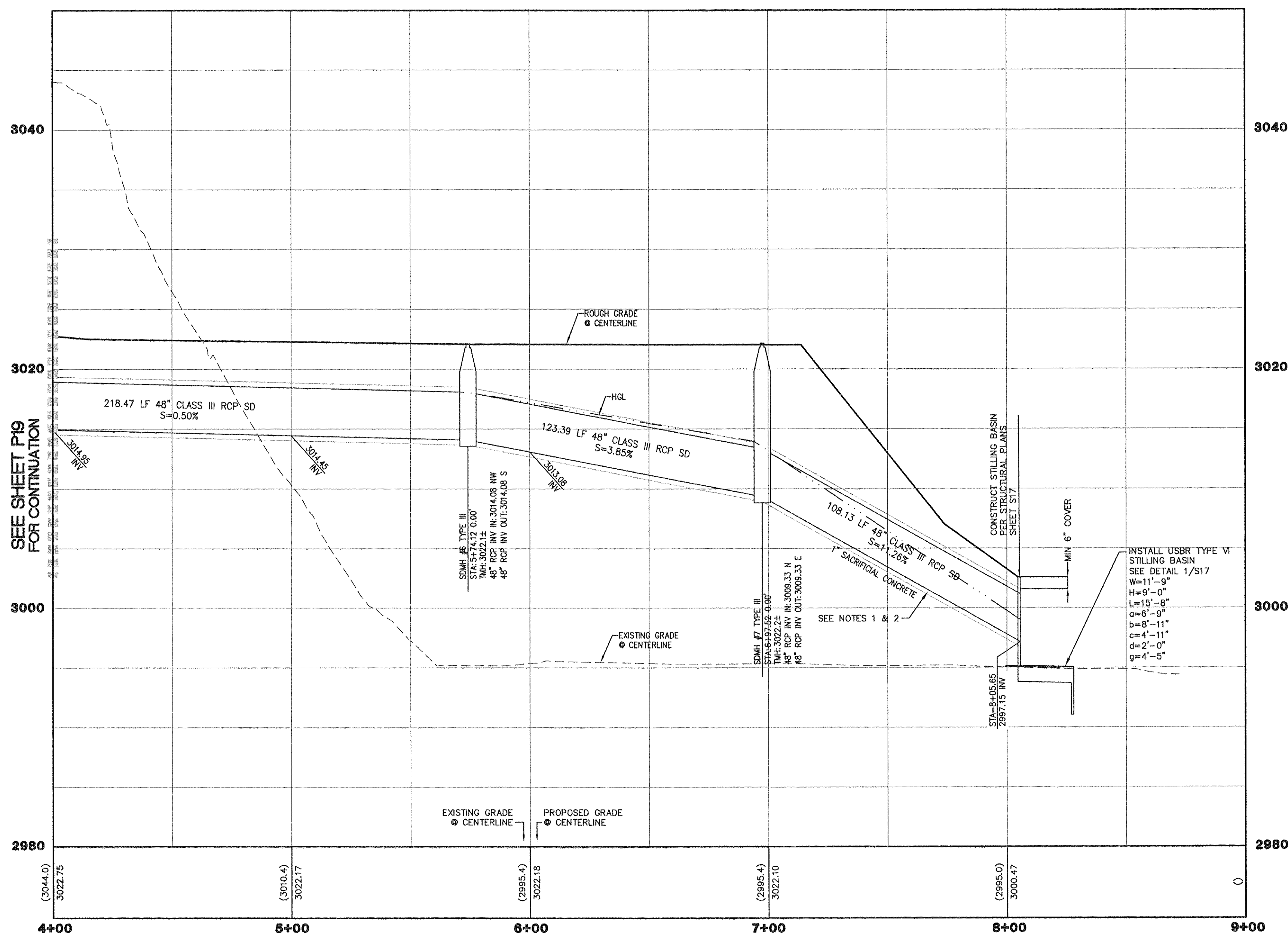
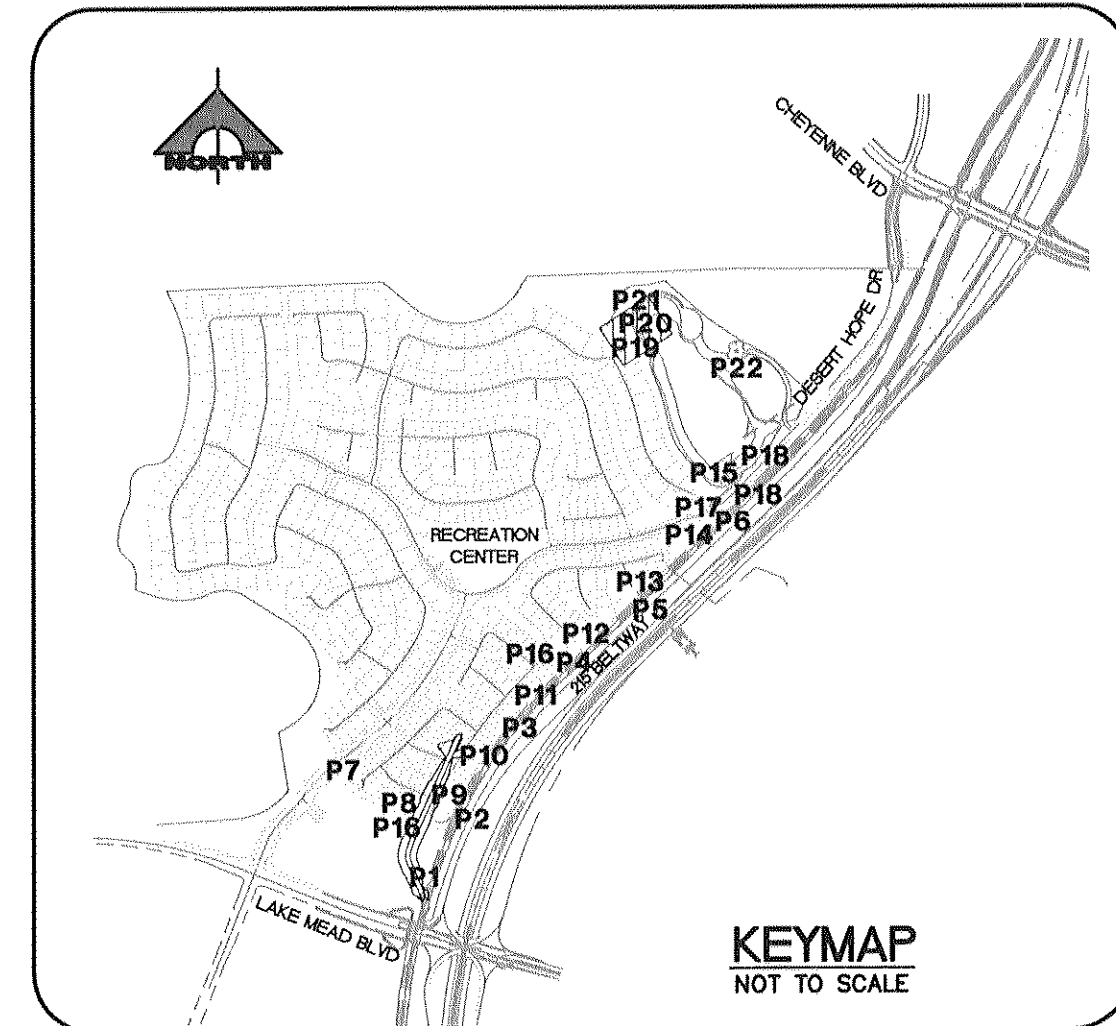
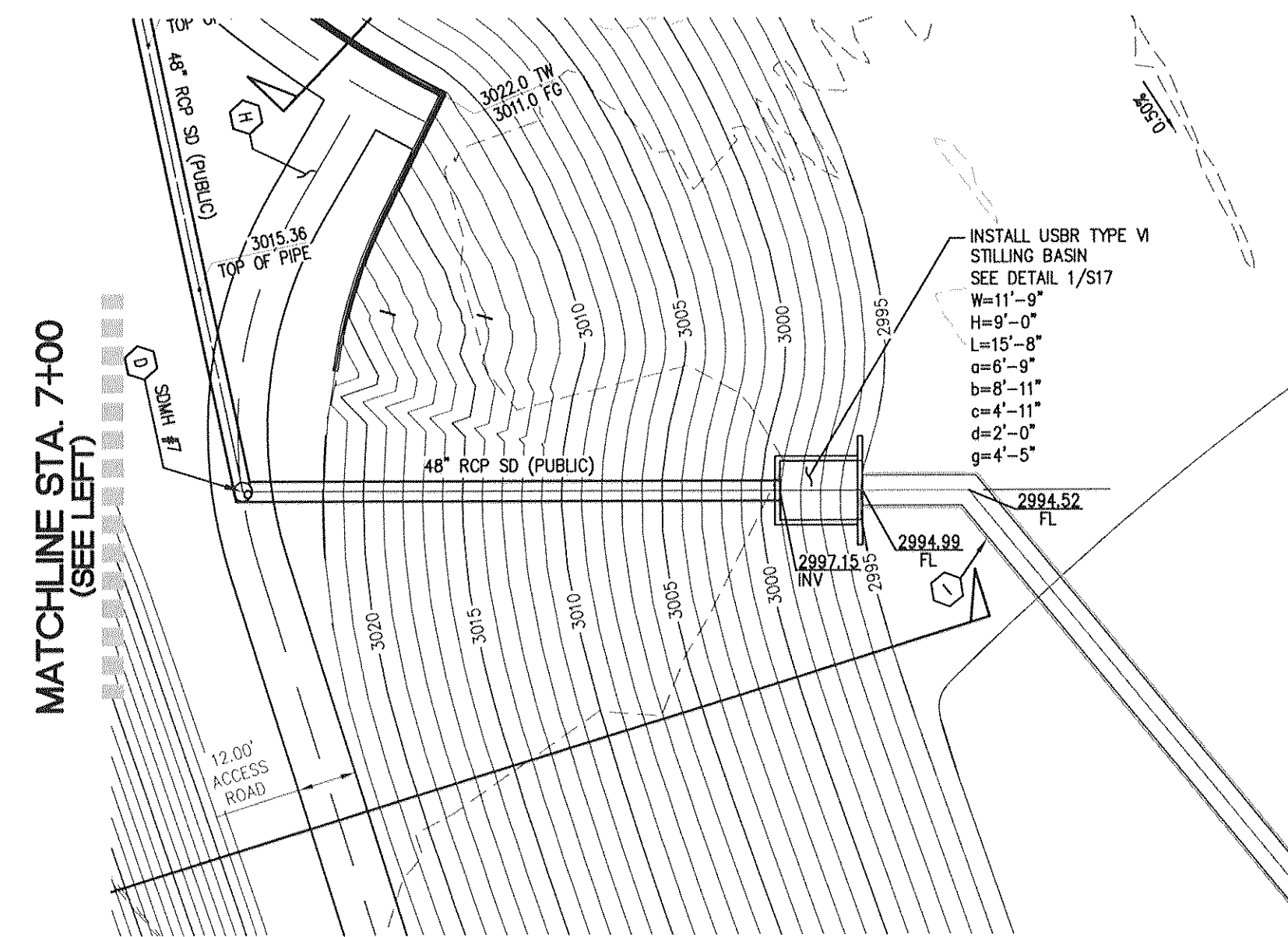
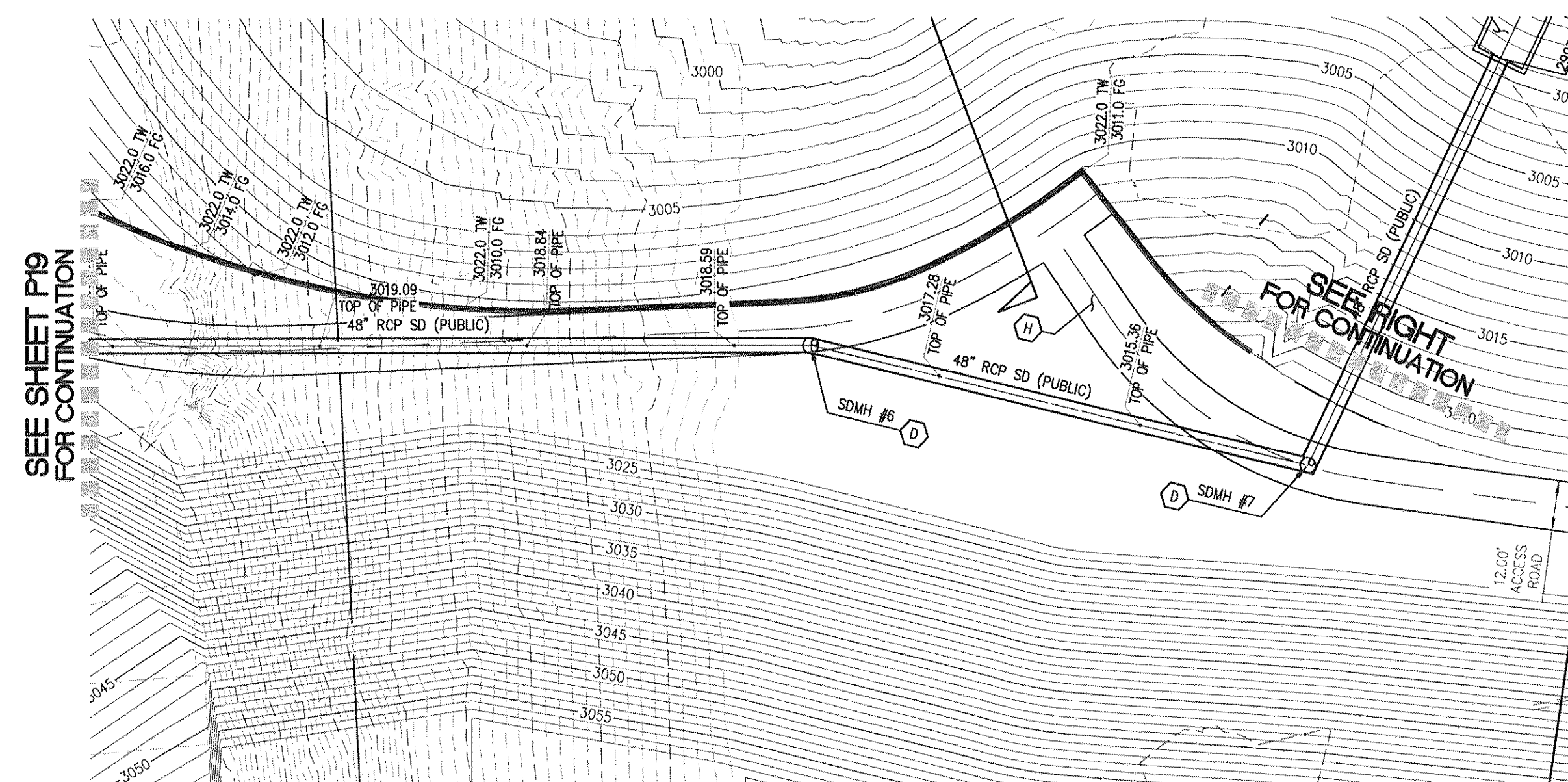
BENCHMARK
CITY OF LAS VEGAS BENCHMARK #0368 3
USC&GS DISC SET IN ROCK EAST OF CHARLESTON SOUTH OF DETENTION BASIN
ELEV (NAVD 88) = 989.5990 METERS
3246.71 U.S. SURVEY FEET
SUMMERLIN WEST; CLV NAVD 88/93
ELEV = 989.5703 METERS
3246.62 U.S. SURVEY FEET

NOTE:
ALL EXISTING UTILITIES SHOWN FOR GRAPHICAL PURPOSES ONLY. CONTRACTOR RESPONSIBLE FOR UTILITY LOCATE AND VERIFICATION ENGINEER MUST BE NOTIFIED OF ANY DISCREPANCIES.



PROJECT NO.	764-204-013
DESIGN	HN
DRAWN	NP
CHECK	NP
PLOT DATE	03-17-16
PLOT TIME	14:14:57
REVISION	DATE
DESCRIPTION	
PROJECT NO. 764-204-013	
1555 S. RAINBOW BLVD. LAS VEGAS, NV 89146 T: 702.804.2000 F: 702.804.2299 govenengineering.com	
GCV' ENGINEERS & SURVEYORS	
PULTE HOMES	
SUMMERLIN VILLAGE 26 - REVERENCE OFFSITE DRAINAGE IMPROVEMENTS	
36" RCP LATERAL PLAN AND PROFILE - STA 44+49.18	
36" RCP LATERAL PLAN AND PROFILE - STA 49+92.04	
DRAWING P17	
35 OF 87 SHEETS	

% COMPLETE



- NOTES:**

STORM DRAIN NOTES:

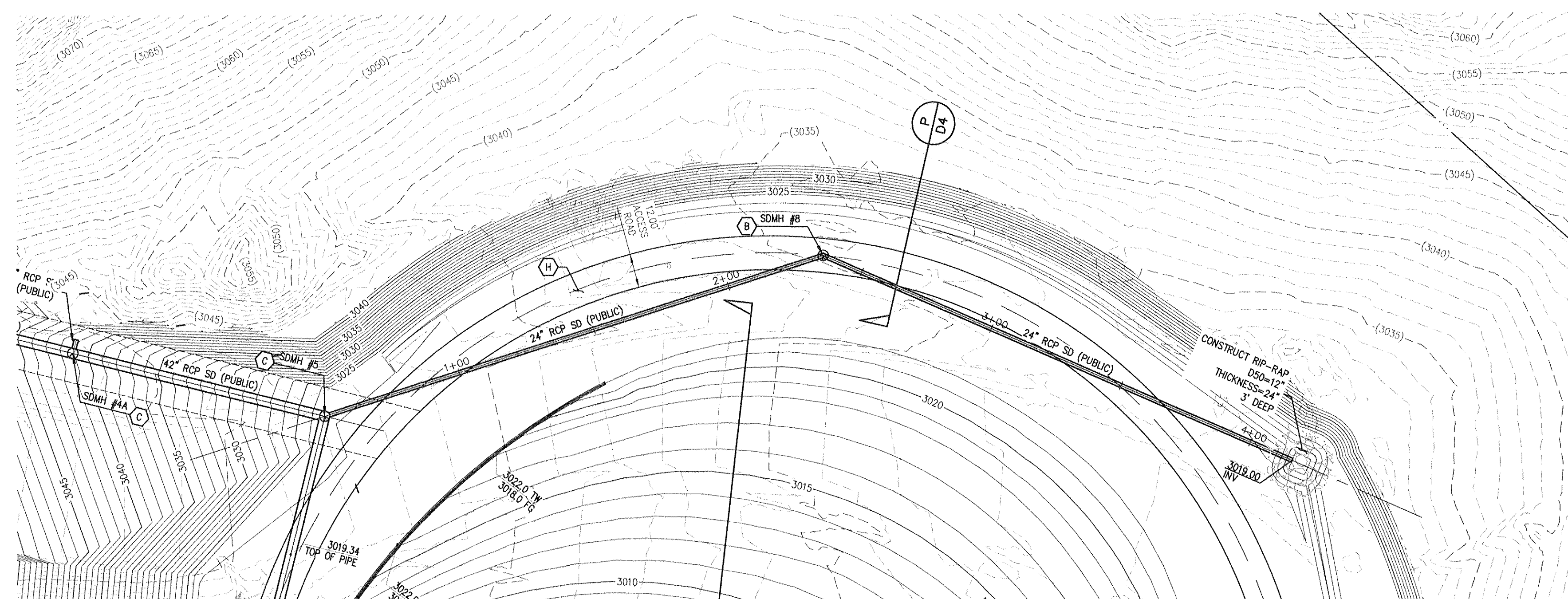
NOTE TO CONTRACTOR

BASIS OF BEARING

BENCHMARK

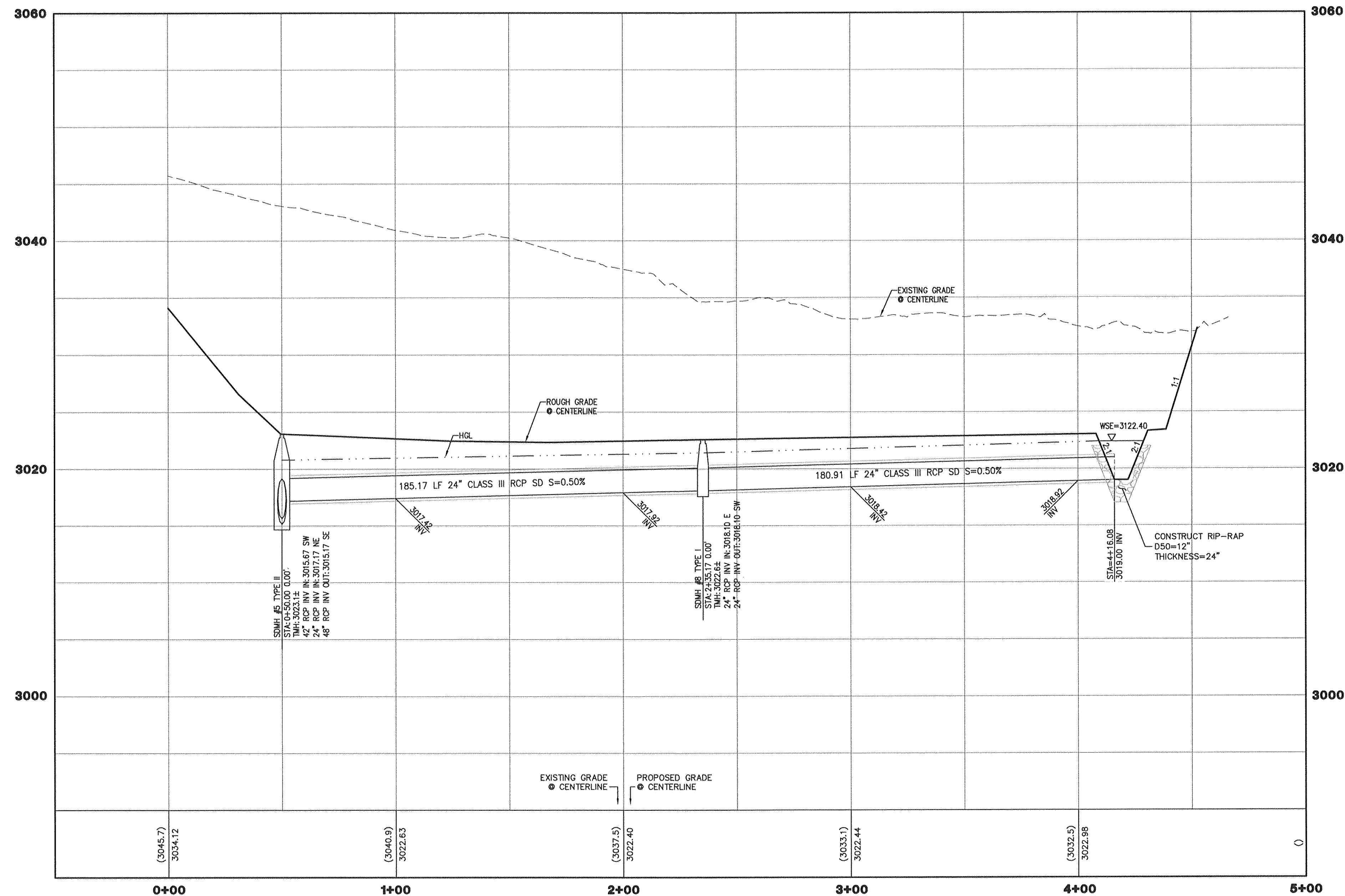
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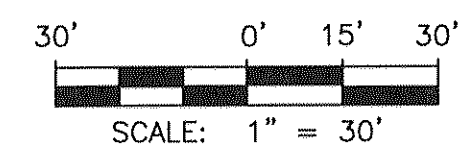
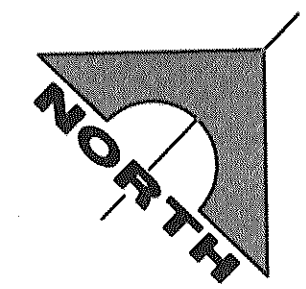
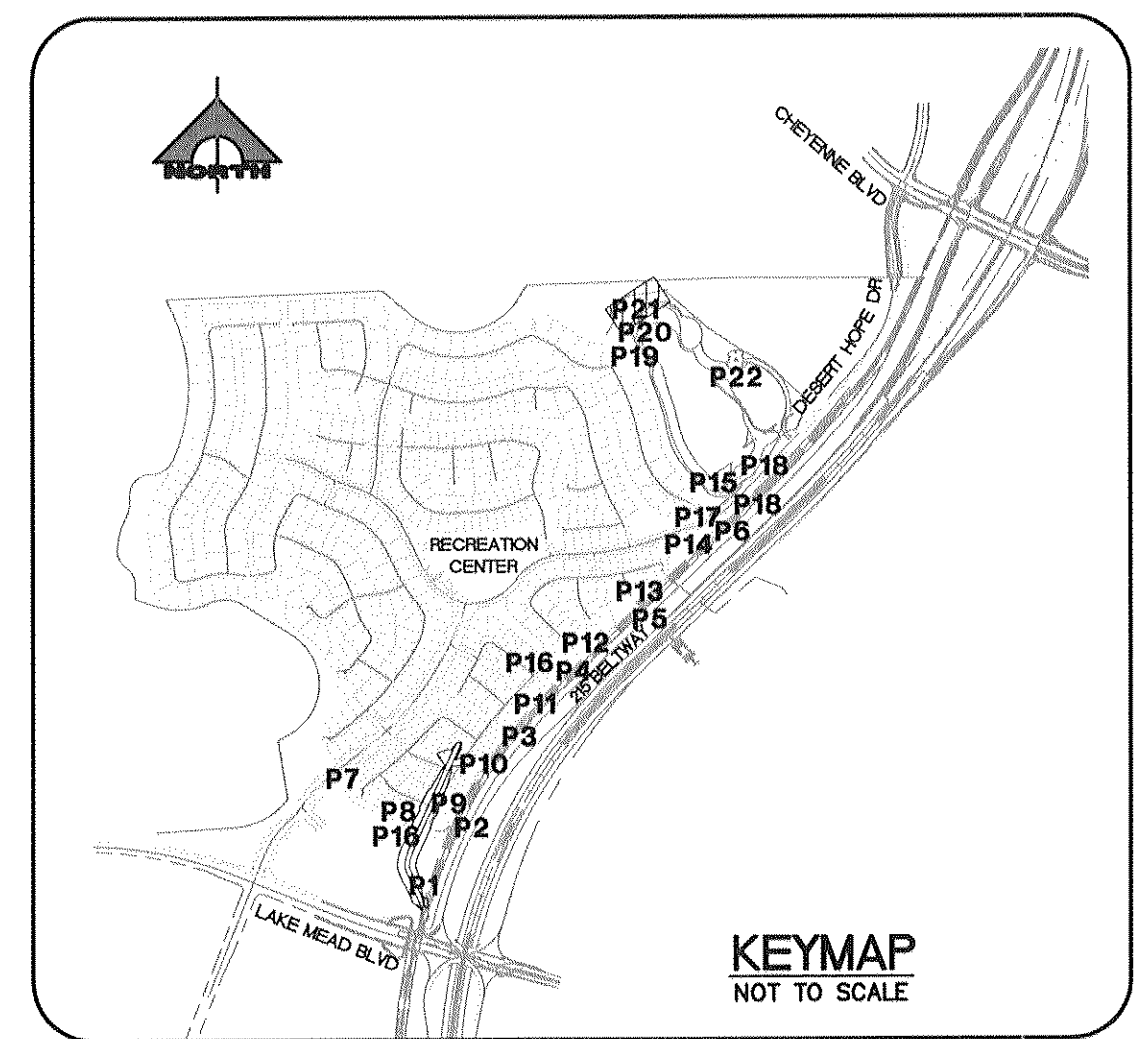
DETENTION BASIN STORM DRAIN 2

(PUBLIC)
SCALE: 1"=30'



PROFILE

SCALE
HORIZ. 1" = 30'
VERT. 1" = 6'



STORM DRAIN NOTES:

- | | |
|------------|--|
| (A) | CONSTRUCT 48" TYPE I MANHOLE PER USDOCCA DWG NOL 403. SEE STRUCTURAL PLANS FOR BOX PENETRATION DETAIL. |
| (B) | CONSTRUCT 48" TYPE I MANHOLE PER USDOCCA DWG NO. 403.1. |
| (C) | CONSTRUCT 48" TYPE II MANHOLE PER USDOCCA DWG NO. 405.1. |
| (D) | CONSTRUCT 60" TYPE III MANHOLE PER USDOCCA DWG NO. 406.1. |
| (E) | CONSTRUCT LADDER PER STRUCTURAL PLANS. SEE SHEET C3 FOR LOCATION TABLE. |
| (F) | CONSTRUCT SPLASH GUARD AT CHANNEL ACCESS RAMP WALL PER STRUCTURAL PLANS. |
| (G) | CONSTRUCT 2" AC PAVEMENT OVER 4" TYPE II AB. |
| (H) | CONSTRUCT 2" CRUSHED GRAVEL OVER 4" TYPE II 95% COMPACTION FOR H20 DRIVABLE SURFACE. |

NOTE TO CONTRACTOR

CONTRACTOR TO VERIFY ALL EXISTING SEWER, STORM DRAIN, & WATER SIZES, INVERTS AND LOCATIONS. IF A DISCREPANCY EXISTS, CONTRACTOR TO NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION.

BASIS OF BEARING

SOUTH 89°39'55" EAST, BEING THE BEARING OF THE NORTH LINE OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 13, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., AS SHOWN BY MAP THEREOF ON FILE IN FILE 91, PAGE 28 OF PARCEL MAPS IN THE CLARK COUNTY RECORDER'S OFFICE, CLARK COUNTY, NEVADA.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK #0368 3
USC&GS DISC SET IN ROCK EAST OF CHARLESTON SOUTH OF DETENTION BASIN

ELEV (NAVD 88) = 989.5990 METERS
3246.71 U.S. SURVEY FEET
SUMMERLIN WEST: CLV NAVD 88/93
ELEV = 989.5703 METERS
3246.62 U.S. SURVEY FEET

Call before you dig
Avoid cutting underground utility lines, it's costly.
Call
811
OR
1-800-227-2600

FAST
Call before you UnderGround
1-702-432-5300
PROMAX AND AUSTRIAL

NOTE:

ALL EXISTING UTILITIES SHOWN FOR GRAPHICAL PURPOSES ONLY, CONTRACTOR RESPONSIBLE FOR UTILITY LOCATE AND VERIFICATION ENGINEER MUST BE NOTIFIED OF ANY DISCREPANCIES.

H#

CLV DWG#

DATE: 3/16/17

[illegible][illegible]

764-204-013

DESIGN: HN
DRAWN:

HECK: WP
LOT DATE: 03-17-16

1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146

T: 702.804.2000
F: 702.804.2299

gcweng@meiling.com

GCI
ENGINEERS SURVEYORS

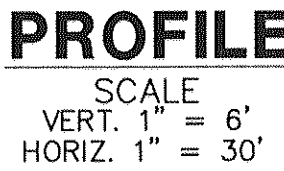
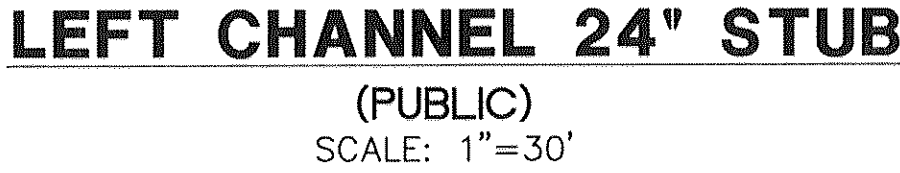
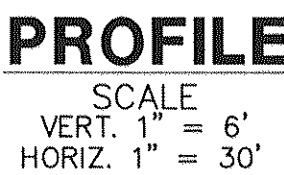
PULTE HOMES

SUMMERLIN VILLAGE 26 - REVERENCE
OFFSITE DRAINAGE IMPROVEMENTS

DETENTION BASIN STORM DRAIN 2
PLAN AND PROFILE

DRAWING
P21
39 OF 87 SHTS

	% COMPLETE
100%	
90%	
80%	
70%	
60%	
50%	
40%	
30%	
20%	
10%	
0%	



- (A) CONSTRUCT 48" TYPE I MANHOLE PER USDOCA DWG NO. 403. SEE STRUCTURAL PLANS FOR BOX PENETRATION DETAIL.
- (B) CONSTRUCT 48" TYPE I MANHOLE PER USDOCA DWG NO. 403.1.
- (C) CONSTRUCT 48" TYPE II MANHOLE PER USDOCA DWG NO. 405.1.
- (D) CONSTRUCT 60" TYPE II MANHOLE PER USDOCA DWG NO. 406.1.
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CITY OF LAS VEGAS BENCHMARK #0368 3
USCGS DISC SET IN ROCK EAST OF CHARLESTON SOUTH OF DETENTION BASIN

ELEV NAVD 88) = 989.5990 METERS
3246.71 U.S. SURVEY FEET

SUMMERLIN WEST: CLV NAVD 88/93
ELEV = 989.5703 METERS
3246.62 U.S. SURVEY FEET



ALL EXISTING UTILITIES SHOWN FOR GRAPHICAL PURPOSES ONLY, CONTRACTOR RESPONSIBLE FOR UTILITY LOCATE AND VERIFICATION ENGINEER MUST BE NOTIFIED OF ANY DISCREPANCIES.

H# CLV DWG;

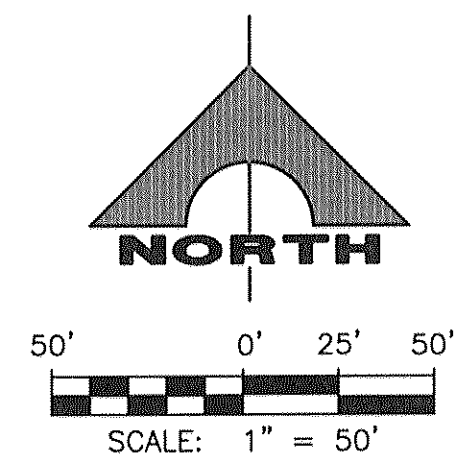
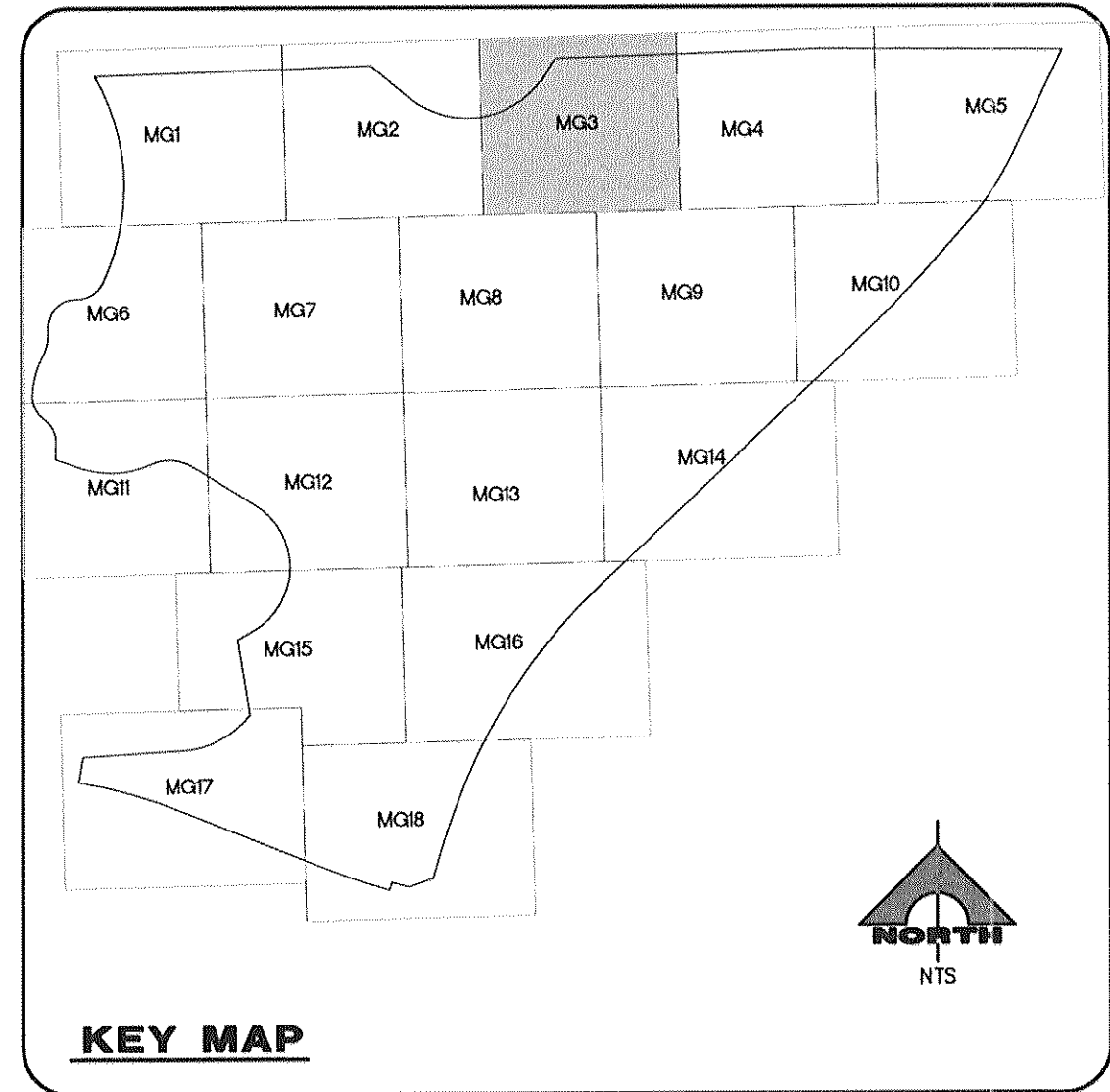
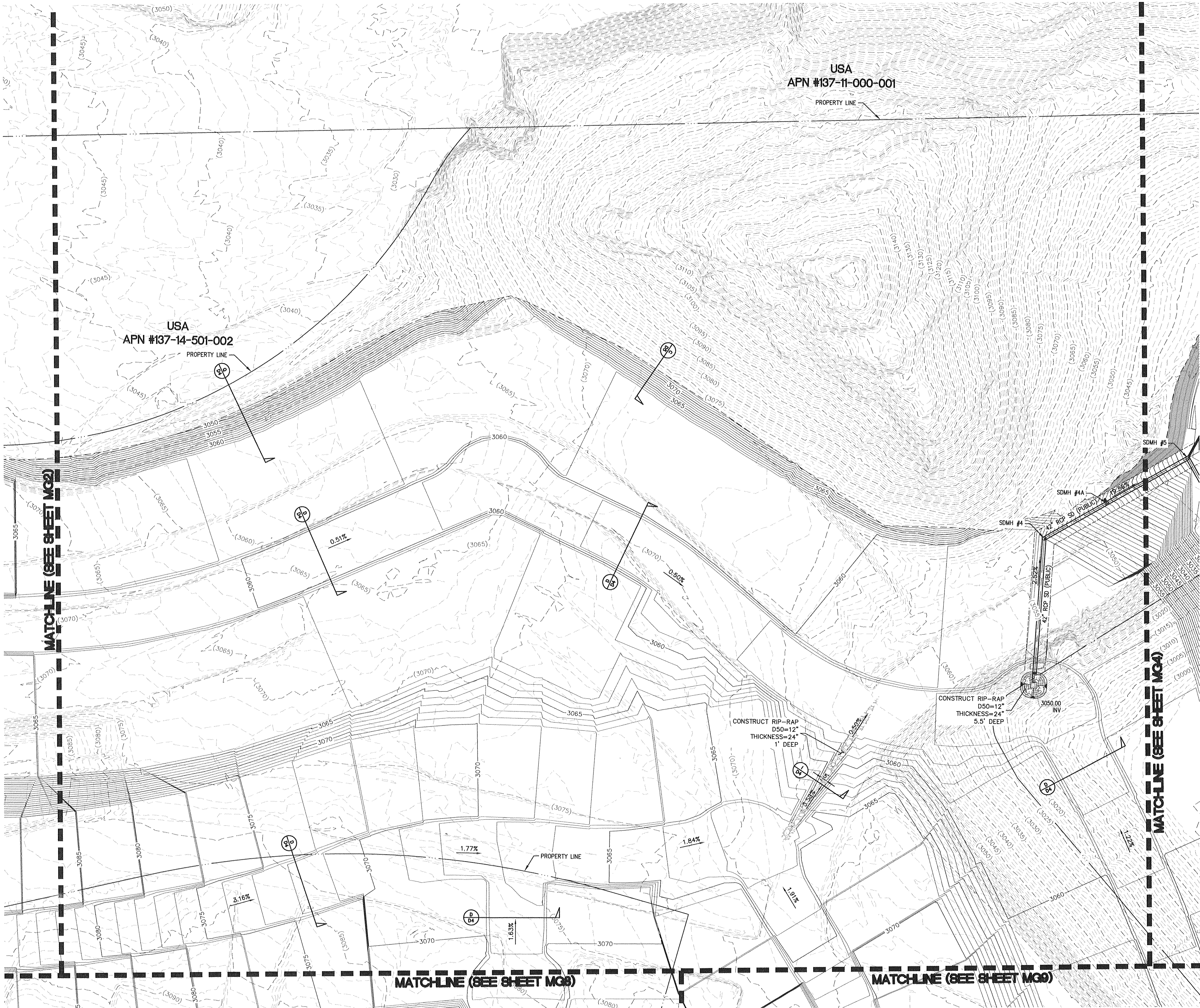
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GCV'
ENGINEERS & SURVEYORS

1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcvengineering.com

VEH. PROJECTS: VIOI 7644 - 204+ - 013 DUNN'S PRODUCTION (OS. DRAINAGE) (01.3041 DWG)
PHO NGUYEN

DRAWING
P22
40 OF 87 SHTS



FLOOD ZONE NOTE:
FLOOD ZONE: NOT IN 100 YEAR ZONE.
FIRM #2150 OF 4090
REVISED: SEPT. 27, 2002.

NOTE TO CONTRACTOR
CONTRACTOR TO VERIFY ALL EXISTING SEWER, STORM DRAIN, & WATER SIZES, INVERTS AND LOCATIONS. IF A DISCREPANCY EXISTS, CONTRACTOR TO NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION.

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SOUTH 89°39'55" EAST, BEING THE BEARING OF THE NORTH LINE OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 13, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., AS SHOWN BY MAP THEREOF ON FILE IN FILE 91, PAGE 28 OF PARCEL MAPS IN THE CLARK COUNTY RECORDER'S OFFICE, CLARK COUNTY, NEVADA.

BENCHMARK
CITY OF LAS VEGAS BENCHMARK #0368.3
US&GS DISC SET IN ROCK EAST OF CHARLESTON SOUTH OF DETENTION BASIN
ELEV (NAVD 88) = 989.5990 METERS
3246.71 U.S. SURVEY FEET
SUMMERLIN WEST: CLV NAVD 88/93
ELEV = 989.5703 METERS
3246.62 U.S. SURVEY FEET

GENERAL NOTES
1. SEE THE UTILITY PLANS (SHEETS U1-U18) FOR WATER LINE DESIGN AND CONSTRUCTION INFORMATION.
2. FOR CONSTRUCTION NOTES SEE SHEET C2.

NOTE:
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FLOOD ZONE NOTE:
FLOOD ZONE: NOT IN 100 YEAR ZONE.
FIRM PANEL #2150 OF 4090
REVISED: SEPT 27, 2002.

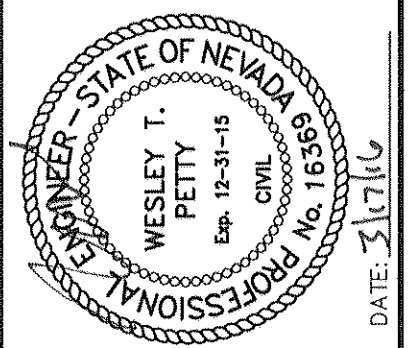
Call before you Dig
Call
1-800-227-2600

FAST
Call before you UnderGround
1-702-432-5300

CALL BEFORE YOU DIG OVERHEAD
1-702-227-2929

DRAINAGE CERTIFICATION
I CERTIFY THAT THE GRADING PLANS ARE IN CONFORMANCE WITH THE APPROVED DRAINAGE STUDY ON FILE AT THE CITY OF LAS VEGAS FOR THIS PROJECT.
WESLEY T. PETTY P.E. 16389 DATE 3/17/16

ENGINEER'S EVALUATION OF GRADING QUANTITIES
PLEASE NOTE: THESE QUANTITIES ARE ESTIMATES ONLY. ACTUAL QUANTITIES MAY DIFFER FROM THE ESTIMATE DUE TO SOILS VARIATIONS IN THE FIELD. VOLUMES CALCULATED WITHOUT SHRINKAGE OR SUBSIDENCE FACTORS AND DO NOT INCLUDE OVEREXCAVATION REQUIRED FOR THE REMOVAL OF CALICHE OR ANY OTHER UNDESIRABLE MATERIALS. REFER TO THE SOILS REPORT FOR THESE AREAS. ALSO NOT INCLUDED ARE QUANTITIES FOR ADDITIONAL DITCHES & BERMS NOT SHOWN THAT MAY BE REQUIRED BY THE ENGINEER.
COMPUTED CUT VOLUME: 1,383,891 CYS
COMPUTED FILL VOLUME: 1,727,100 CYS
IMPORT: 343,409 CYS



DATE	REV	DESCRIPTION
3/17/16	1	ISSUED FOR PERMIT

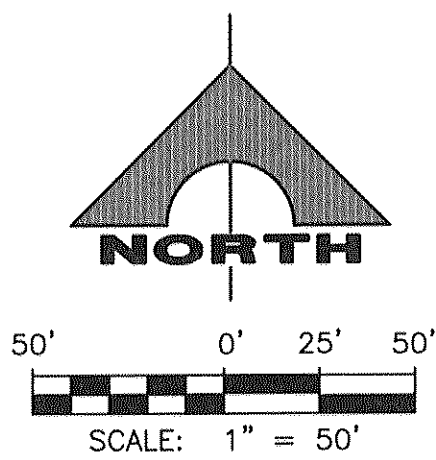
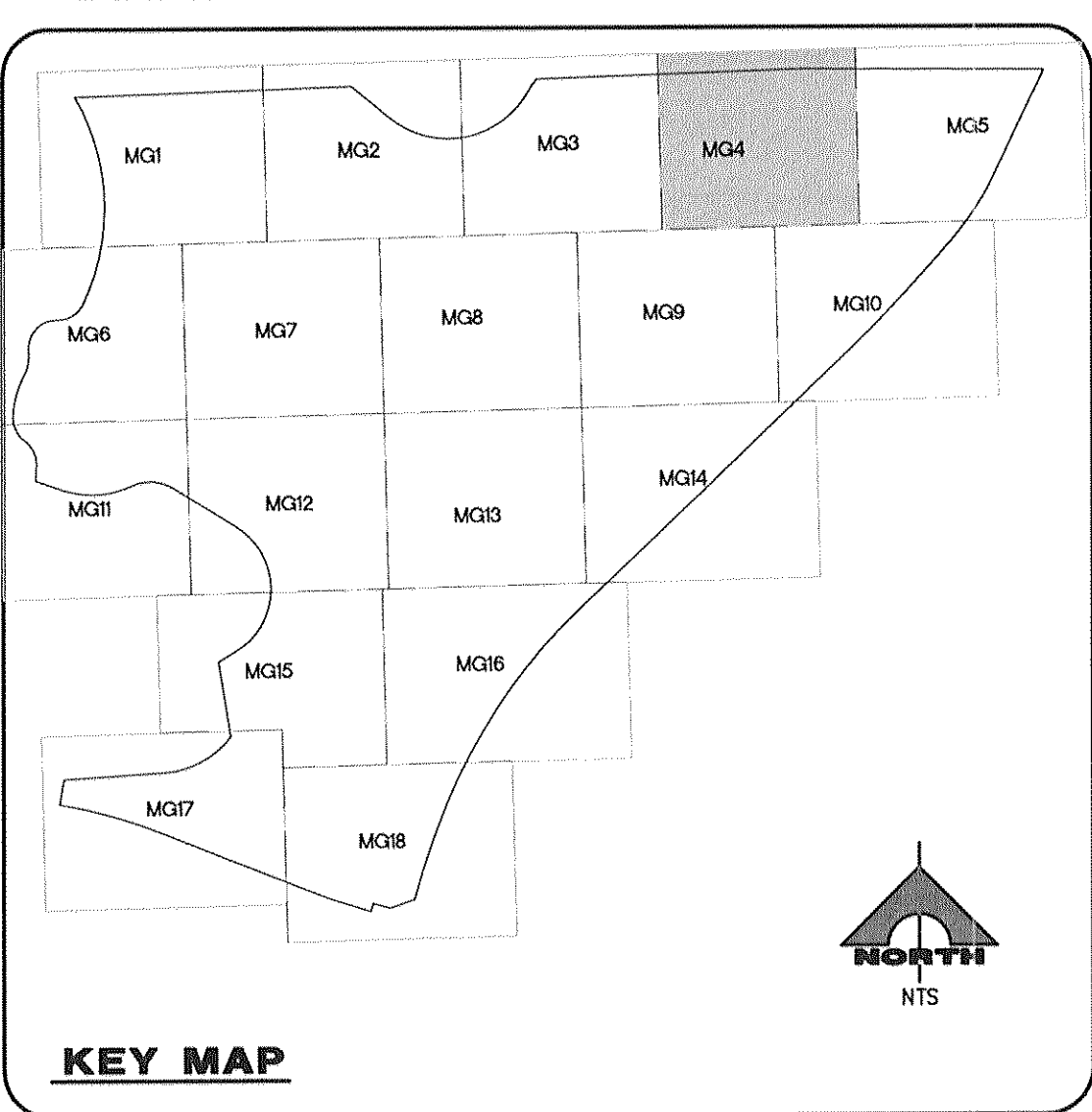
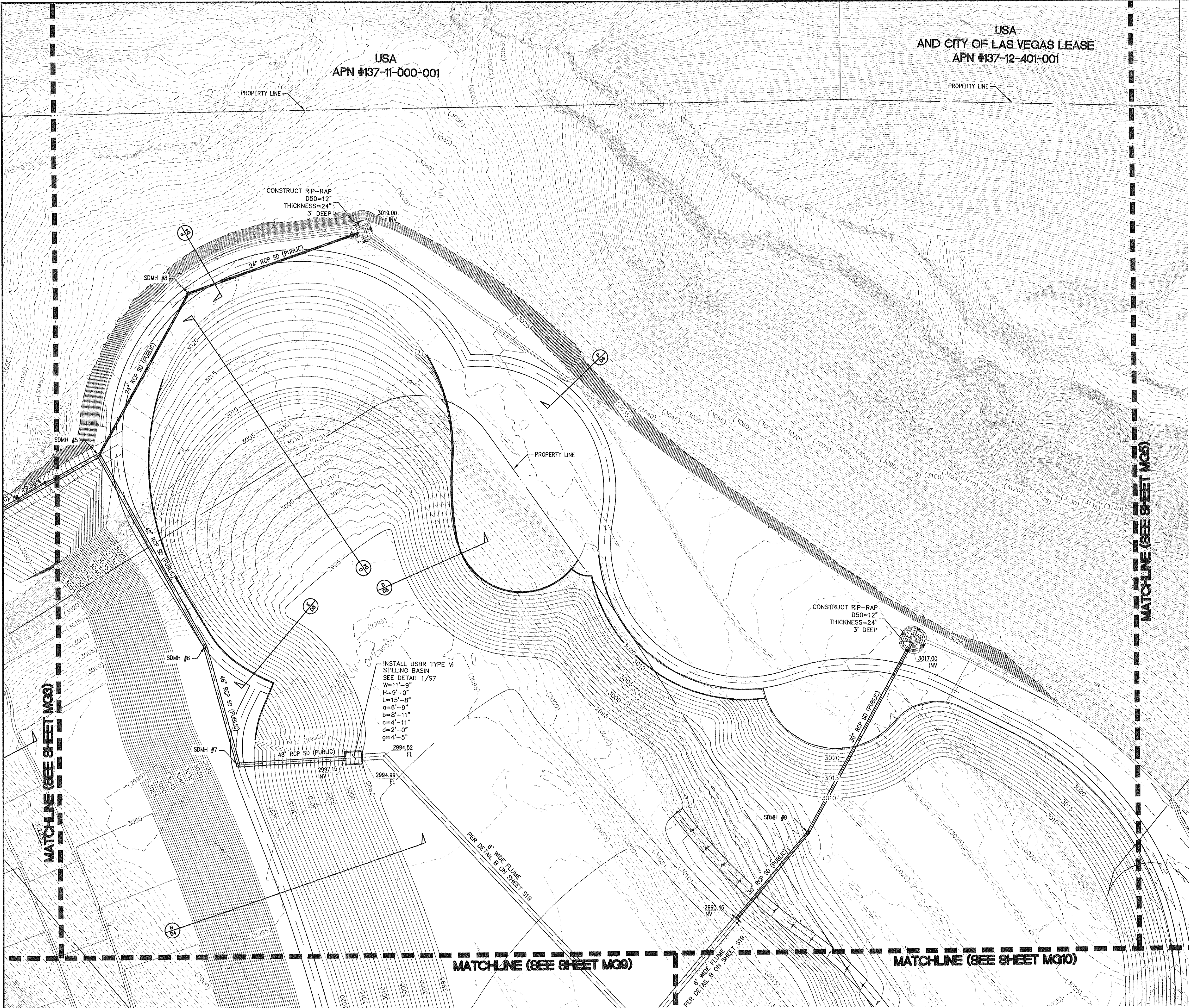
PROJECT NO. 764-204-013
DESIGN: GW
DRAWN: GW
CHECK: GW
PLOT DATE: 03-17-16
PLOT TIME: 14:11:08

GCV
ENGINEERS & SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcvengineering.com

PULTE HOMES
SUMMERLIN VILLAGE 26 - REFERENCE OFFSITE DRAINAGE IMPROVEMENTS
MASS GRADING PLAN III
DRAWING MG3
43 OF 87 SHITS

H# --- CLV DWG# ---

% COMPLETE



FLOOD ZONE NOTE:
FLOOD ZONE: NOT IN 100 YEAR ZONE.
FIRM #2150 OF 4090
REVISED: SEPT. 27, 2002.

NOTE TO CONTRACTOR

CONTRACTOR TO VERIFY ALL EXISTING SEWER, STORM DRAIN, & WATER SIZES, INVERTS AND LOCATIONS. IF A DISCREPANCY EXISTS, CONTRACTOR TO NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION.

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BENCHMARK

CITY OF LAS VEGAS BENCHMARK #0368.3
USC&GS DISC SET IN ROCK EAST OF CHARLESTON SOUTH OF DETENTION BASIN
ELEV (NAVD 88) = 989.5990 METERS
3246.71 U.S. SURVEY FEET
SUMMERLIN WEST: CLV NAVD 88/93
ELEV = 989.5703 METERS
3246.62 U.S. SURVEY FEET

GENERAL NOTES

- SEE THE UTILITY PLANS (SHEETS U1-U18) FOR WATER LINE DESIGN AND CONSTRUCTION INFORMATION.
- FOR CONSTRUCTION NOTES SEE SHEET C2.

NOTE:

ALL EXISTING UTILITIES SHOWN FOR GRAPHICAL PURPOSES ONLY. CONTRACTOR RESPONSIBLE FOR UTILITY LOCATE AND VERIFICATION ENGINEER MUST BE NOTIFIED OF ANY DESPEYING.

FLOOD ZONE NOTE:

FLOOD ZONE: NOT IN 100 YEAR ZONE.
FIRM PANEL #2150 OF 4090
REVISED: SEPT 27, 2002.

Call before you Dig
Avoid cutting underground
utility without costly.



FAST
Call before you
UnderGround



CALL BEFORE
YOU DO
OVERHEAD



DRAINAGE CERTIFICATION

I CERTIFY THAT THE GRADING PLANS ARE IN CONFORMANCE WITH THE APPROVED DRAINAGE STUDY ON FILE AT THE CITY OF LAS VEGAS FOR THIS PROJECT.

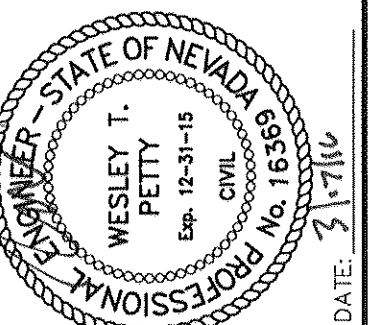
WESLEY T. PETTY P.E. 16369 DATE: 3/17/16

ENGINEER'S EVALUATION OF GRADING QUANTITIES

PLEASE NOTE: THESE QUANTITIES ARE ESTIMATES ONLY. ACTUAL QUANTITIES MAY DIFFER FROM THE ESTIMATE DUE TO SOILS VARIATIONS IN THE FIELD. VOLUMES CALCULATED WITHOUT SHRINKAGE OR SUBSIDENCE FACTORS AND DO NOT INCLUDE OVEREXCAVATION REQUIRED FOR THE REMOVAL OF CALICHE OR ANY OTHER UNDESIRABLE MATERIALS. REFER TO THE SOILS REPORT FOR THESE AREAS. ALSO NOT INCLUDED ARE QUANTITIES FOR ADDITIONAL DITCHES & BERMS NOT SHOWN THAT MAY BE REQUIRED BY THE ENGINEER.

COMPUTED CUT VOLUME: 1,383,691 CYS
COMPUTED FILL VOLUME: 1,727,100 CYS
IMPORT: 343,409 CYS

H# --- CLV DWG# ---



PROJECT NO.	DATE	ACEN APP	DATE	GCW APP	DATE	DESCRIPTION	REV	DATE
764-204-013								

DESIGN: 764-204-013
DRAWN: 764-204-013
CHECK: 764-204-013
PLOT DATE: 03-17-16
PLOT TIME: 14:10:55

PROJECT NO.
764-204-013
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gowengineering.com

PULTE HOMES
SUMMERLIN VILLAGE 26 - REVERENCE
OFFSITE DRAINAGE IMPROVEMENTS
MASS GRADING PLAN IV

DRAWING
MG4
44 OF 87 SHTS

% COMPLETE

MATCHLINE (SEE SHEET MG4)

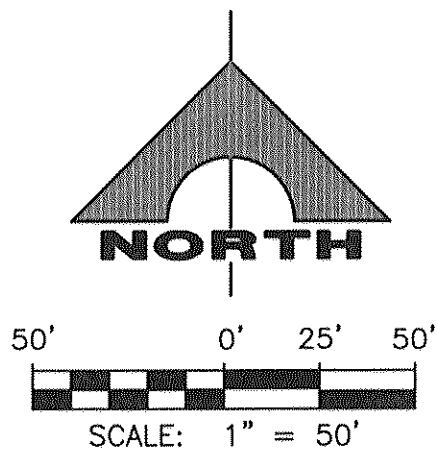
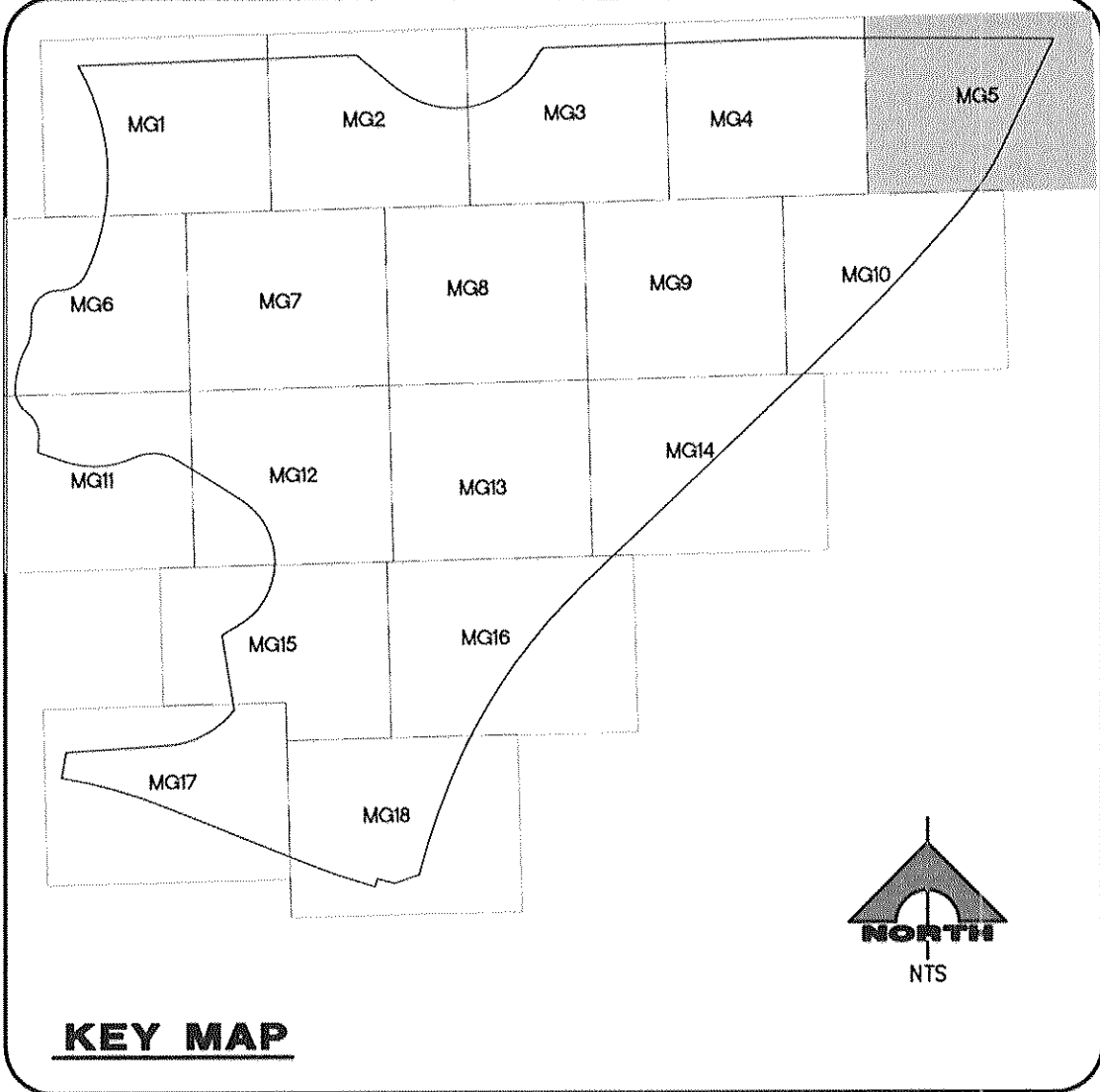
MATCHLINE (SEE SHEET MG10)

WEINMAN FAMILY TRUST AND
WEINMAN LAWRENCE THEODORE TRS
APN #137-12-401-010

PUBLIC RIGHT OF WAY
APN #137-12-499-002

CHURCH INTERNATIONAL LAS VEGAS
APN #137-12-401-011

USA AND CITY OF LAS VEGAS
LEASE
APN #137-12-401-040



FLOOD ZONE NOTE:
FLOOD ZONE: NOT IN 100 YEAR ZONE.
FIRM #2150 OF 4090
REVISED: SEPT. 27, 2002.

NOTE TO CONTRACTOR

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BENCHMARK

CITY OF LAS VEGAS BENCHMARK #0368.3
USC&GS DISC SET IN ROCK EAST OF CHARLESTON SOUTH OF DETENTION BASIN
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3246.71 U.S. SURVEY FEET
SUMMERLIN WEST: CLV NAVD 88/93
ELEV = 989.5703 METERS
3246.62 U.S. SURVEY FEET

GENERAL NOTES

- SEE THE UTILITY PLANS (SHEETS U1-U18) FOR WATER LINE DESIGN AND CONSTRUCTION INFORMATION.
- FOR CONSTRUCTION NOTES SEE SHEET C2.

NOTE:

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FLOOD ZONE NOTE:

FLOOD ZONE: NOT IN 100 YEAR ZONE.
FIRM PANEL #2150 OF 4090
REVISED: SEPT 27, 2002.



DRAINAGE CERTIFICATION

I CERTIFY THAT THE GRADING PLANS ARE IN CONFORMANCE WITH THE APPROVED DRAINAGE STUDY ON FILE AT THE CITY OF LAS VEGAS FOR THIS PROJECT.

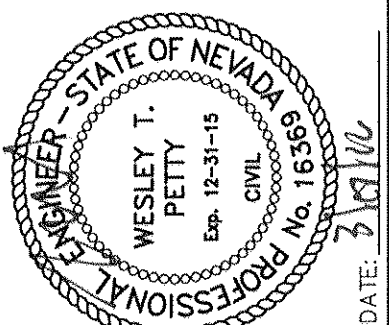
WESLEY T. PETTY P.E. 16369 DATE 3/16/17

ENGINEER'S EVALUATION OF GRADING QUANTITIES

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COMPUTED CUT VOLUME: 1,383,691 CYS
COMPUTED FILL VOLUME: 1,727,100 CYS
IMPORT: 343,409 CYS

H# CLV DWG#



DATE	REV	DESCRIPTION
3/16/17		

PROJECT NO. 764-204-013
DESIGN: T. 702.804.2000
DRAWN: F. 702.804.2299
CHECK: gowengineering.com
PLOT DATE: 03-17-16
PLOT TIME: 14:11:01

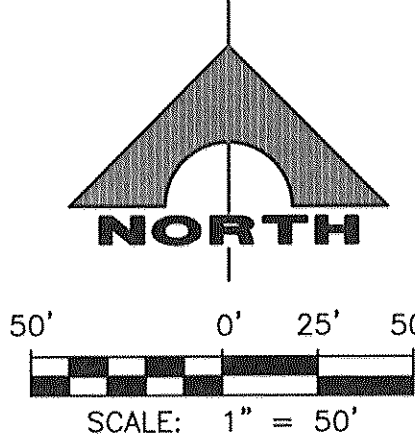
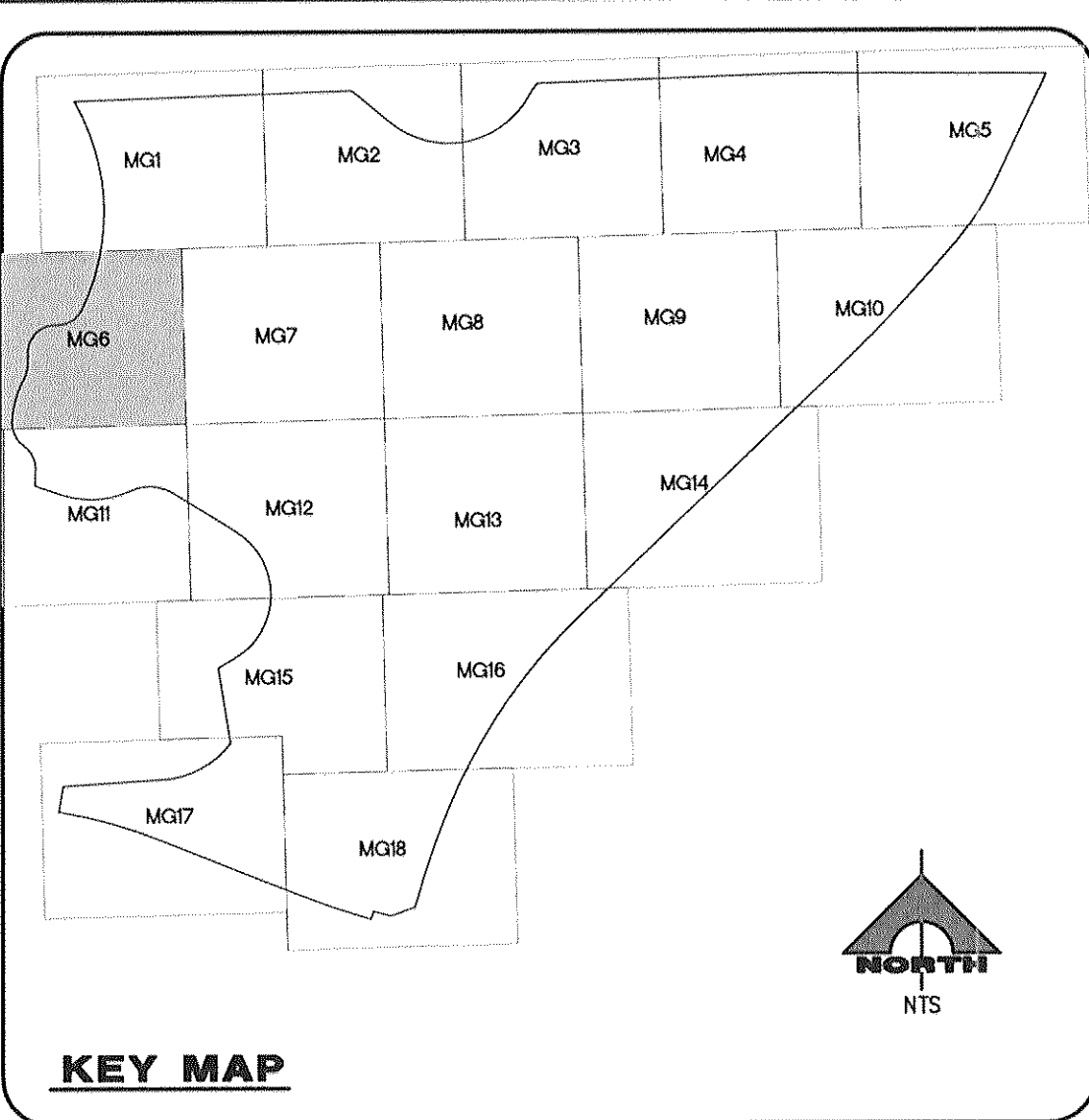
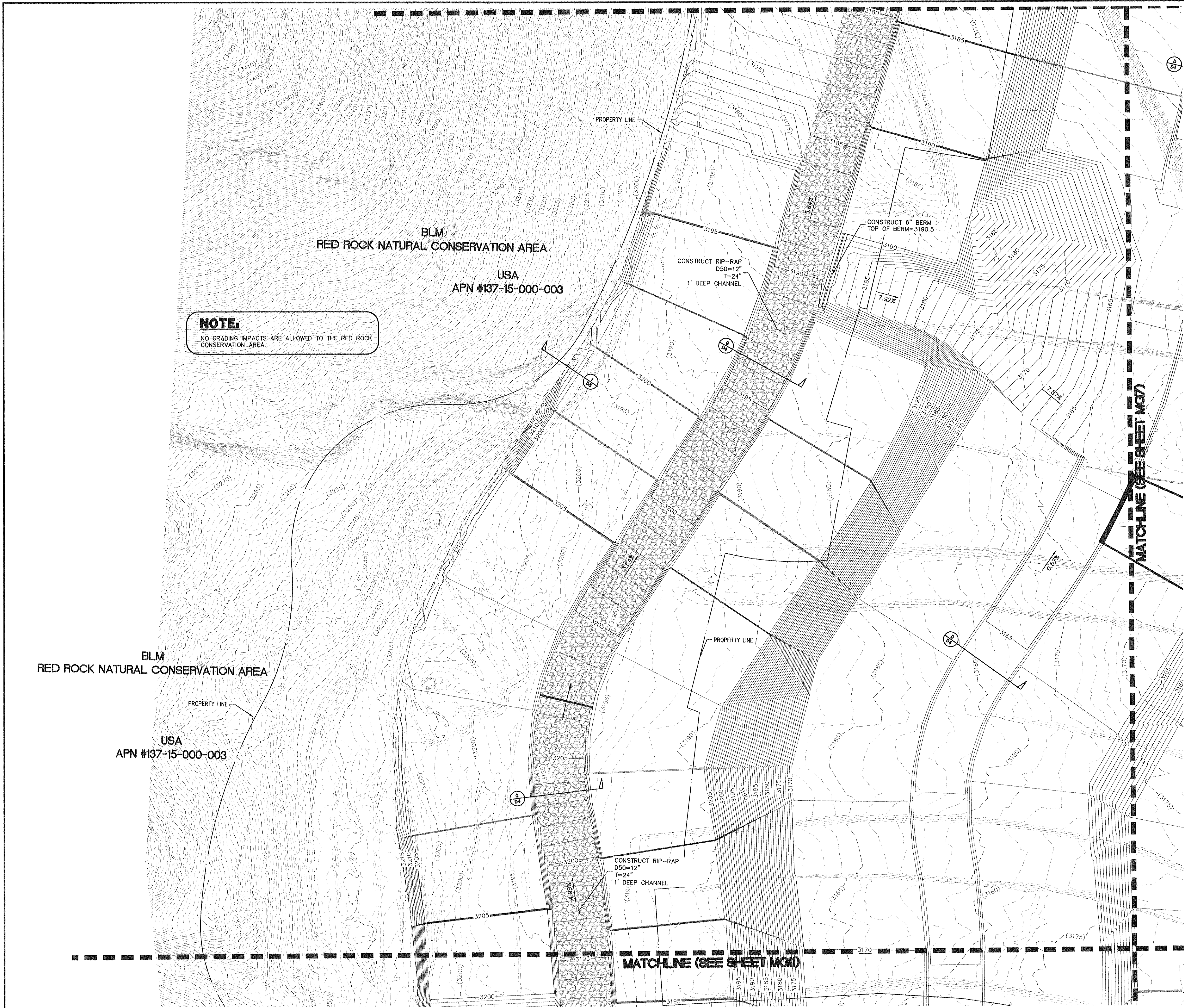
GCV' 1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gowengineering.com
ENGINEERS & SURVEYORS

PULTE HOMES
SUMMERLIN VILLAGE 26 - REFERENCE
OFFSITE DRAINAGE IMPROVEMENTS
MASS GRADING PLAN V

DRAWING
MG5

45 OF 87 SHTS

% COMPLETE



FLOOD ZONE NOTE:
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FIRM PANEL #2150 OF 4090
REVISED: SEPT. 27, 2002.

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US&GS DISC SET IN ROCK EAST OF CHARLESTON SOUTH OF DETENTION BASIN
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ELEV = 989.5703 METERS
3246.62 U.S. SURVEY FEET

GENERAL NOTES
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FLOOD ZONE NOTE:
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FIRM PANEL #2150 OF 4090
REVISED: SEPT 27, 2002.

Call before you Dig
Avoid existing underground utility lines. Dig safely.
Call
1-800-227-2600

FAST
Call before you UnderGround
1-702-432-5300
FREQUENCY AND ARTERIAL SYSTEM OF TRANSPORTATION

CALL BEFORE YOU DO OVERHEAD
1-702-227-2929

DRAINAGE CERTIFICATION
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WESLEY T. PETTY P.E. 16369 3/17/16 DATE

ENGINEER'S EVALUATION OF GRADING QUANTITIES
PLEASE NOTE THESE QUANTITIES ARE ESTIMATES ONLY. ACTUAL QUANTITIES MAY DIFFER FROM THE ESTIMATE DUE TO SOILS VARIATIONS IN THE FIELD. VOLUMES CALCULATED WITHOUT SHRINKAGE OR SUBSIDENCE FACTORS AND DO NOT INCLUDE OVEREXCAVATION REQUIRED FOR THE REMOVAL OF CALICHE OR ANY OTHER UNDESIRABLE MATERIALS. REFER TO THE SOILS REPORT FOR THESE AREAS. ALSO NOT INCLUDED ARE QUANTITIES FOR ADDITIONAL DITCHES & BERMS NOT SHOWN THAT MAY BE REQUIRED BY THE ENGINEER.
COMPUTED CUT VOLUME: 1,383,691 CYS
COMPUTED FILL VOLUME: 1,727,100 CYS
IMPORT: 343,409 CYS

ENGINEER - STATE OF NEVADA
WESLEY T. PETTY
Exp. 12-31-15
PROFESSIONAL SEAL
DATE: 3/17/16

DATE	ACEN APP	DATE	GCW APP	DATE	DESCRIPTION	REV	DATE

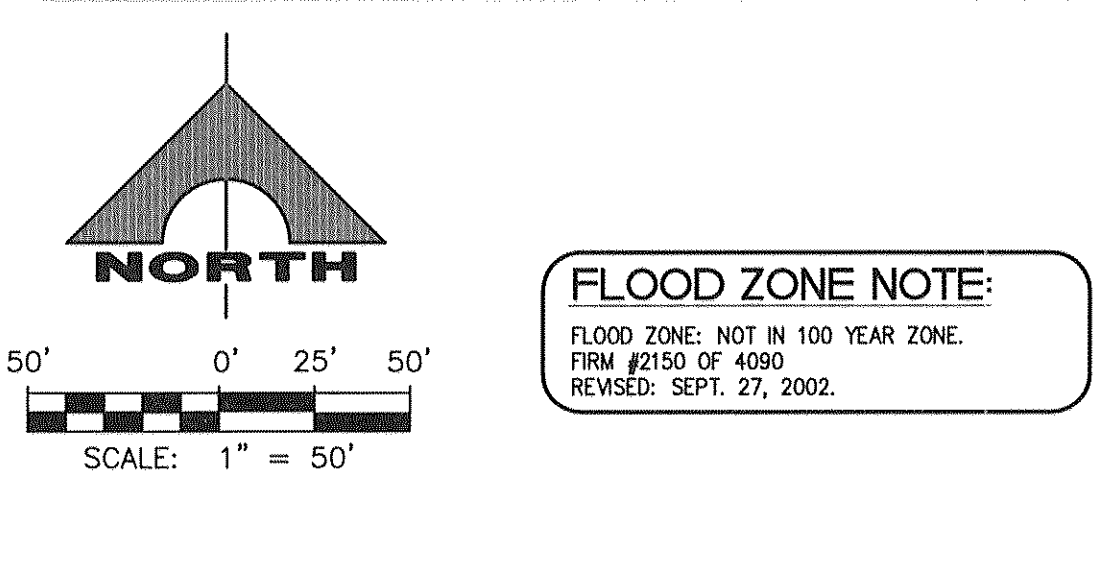
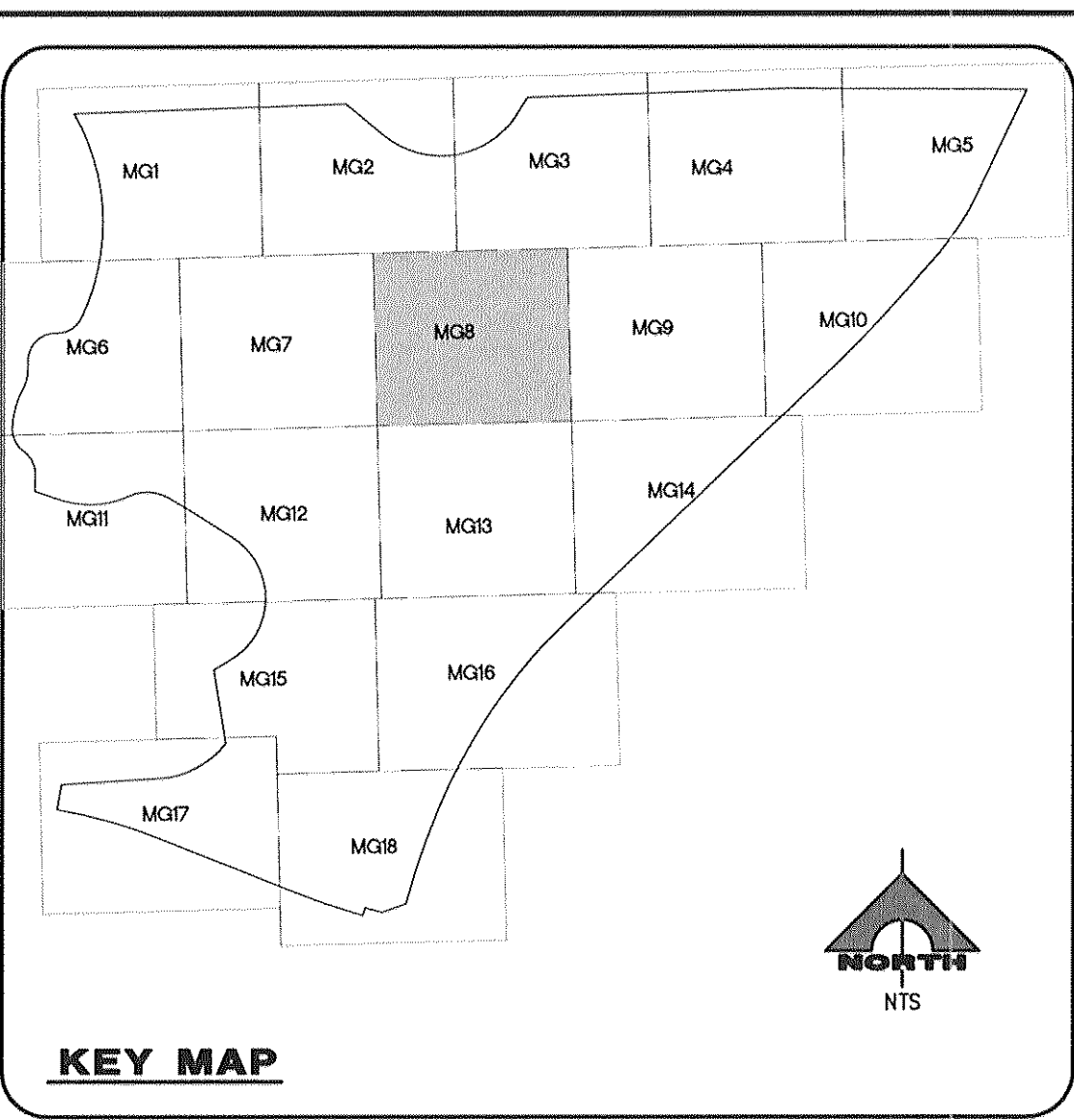
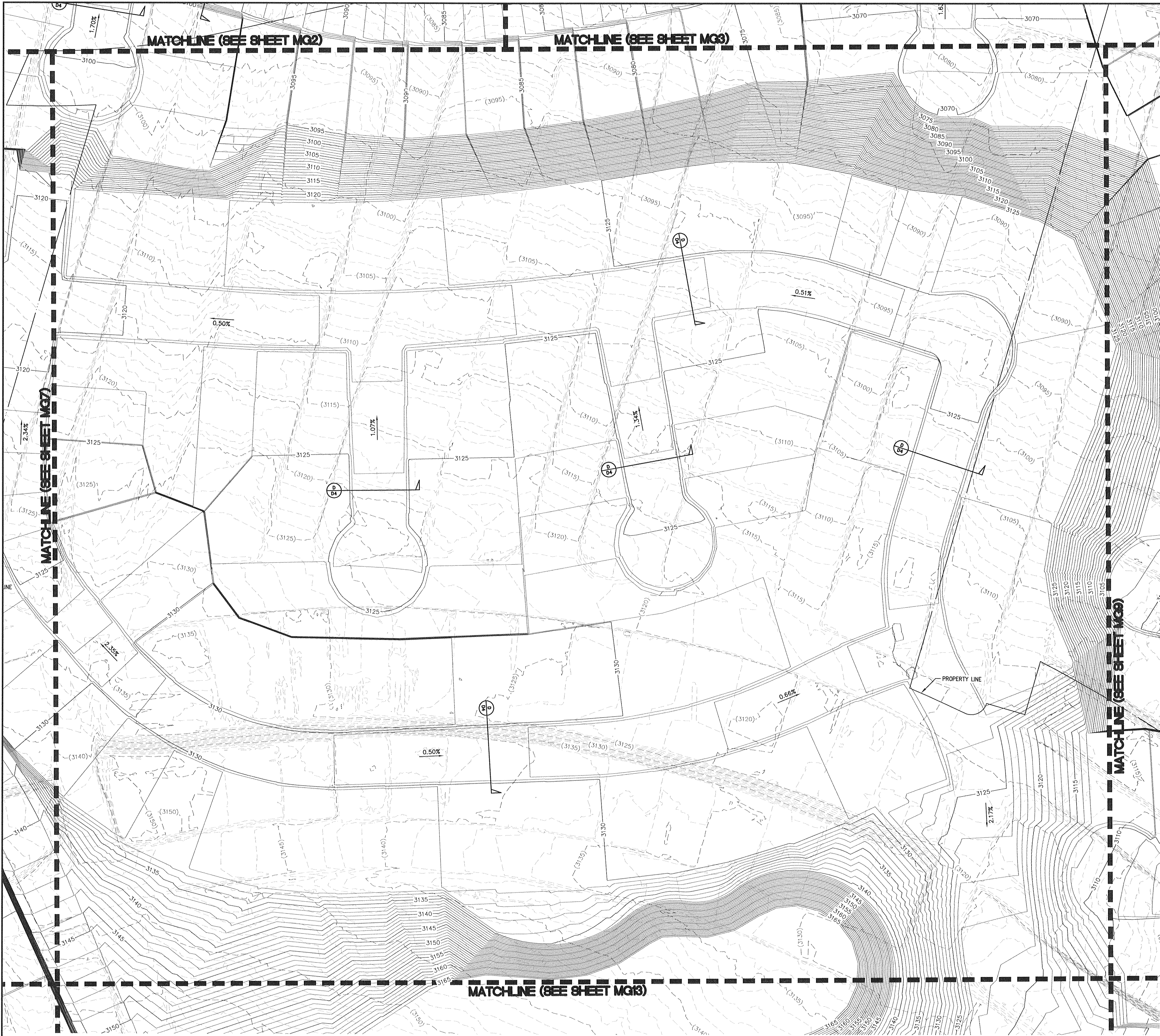
PROJECT NO.
764-204-013
DESIGN:
DRAWN:
CHECK:
PLOT DATE: 03-17-16
PLOT TIME: 14:10:49

GCV
ENGINEERS & SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcvengineering.com
PROJECTS 700\764-204-013\DWG\PRODUCTION\05 DRAINAGE\13.MXD
HAO NGUYEN

PULTE HOMES
SUMMERLIN VILLAGE 26 - REVERENCE
OFFSITE DRAINAGE IMPROVEMENTS
MASS GRADING PLAN V1
DRAWING
MG6
46 OF 87 SHTS

H# --- CLV DWG# ---

% COMPLETE



NOTE TO CONTRACTOR
CONTRACTOR TO VERIFY ALL EXISTING SEWER, STORM DRAIN, & WATER SIZES, INVERTS AND LOCATIONS. IF A DISCREPANCY EXISTS, CONTRACTOR TO NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION.

BASIS OF BEARING
SOUTH 89°39'55" EAST, BEING THE BEARING OF THE NORTH LINE OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 13, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., AS SHOWN BY MAP THEREOF ON FILE IN FILE 91, PAGE 28 OF PARCEL MAPS IN THE CLARK COUNTY RECORDER'S OFFICE, CLARK COUNTY, NEVADA.

BENCHMARK
CITY OF LAS VEGAS BENCHMARK #0368.3
USC&GS DISC SET IN ROCK EAST OF CHARLESTON SOUTH OF DETENTION BASIN
ELEV (NAVD 88) = 989.5990 METERS
3246.71 U.S. SURVEY FEET
SUMMERLIN WEST: CLV NAVD 88/93
ELEV = 989.5703 METERS
3246.62 U.S. SURVEY FEET

GENERAL NOTES
1. SEE THE UTILITY PLANS (SHEETS U1-U18) FOR WATER LINE DESIGN AND CONSTRUCTION INFORMATION.
2. FOR CONSTRUCTION NOTES SEE SHEET C2.

NOTE:
ALL EXISTING UTILITIES SHOWN FOR GRAPHICAL PURPOSES ONLY. CONTRACTOR RESPONSIBLE FOR UTILITY LOCATE AND VERIFICATION ENGINEER MUST BE INFORMED OF ANY DISCREPANCY.

FLOOD ZONE NOTE:
FLOOD ZONE: NOT IN 100 YEAR ZONE. FIRM PANEL #2150 OF 4090. REVISED: SEPT. 27, 2002.

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811
OR
1-800-227-2600

FAST
Call before you UnderGround
1-702-432-6300
FREIGHTWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

CALL BEFORE YOU DO OVERHEAD
1-702-227-2929

DRAINAGE CERTIFICATION
I CERTIFY THAT THE GRADING PLANS ARE IN CONFORMANCE WITH THE APPROVED DRAINAGE STUDY ON FILE AT THE CITY OF LAS VEGAS FOR THIS PROJECT.
WESLEY T. PETTY P.E. 16369 3/17/16 DATE

ENGINEER'S EVALUATION OF GRADING QUANTITIES
PLEASE NOTE THESE QUANTITIES ARE ESTIMATES ONLY. ACTUAL QUANTITIES MAY DIFFER FROM THE ESTIMATE DUE TO SOILS VARIATIONS IN THE FIELD. VOLUMES CALCULATED WITHOUT SHRINKAGE OR SUBSIDENCE FACTORS AND DO NOT INCLUDE OVEREXCAVATION REQUIRED FOR THE REMOVAL OF CALICHE OR ANY OTHER UNDESIRABLE MATERIALS. REFER TO THE SOILS REPORT FOR THESE AREAS. ALSO NOT INCLUDED ARE QUANTITIES FOR ADDITIONAL DITCHES & BERMS NOT SHOWN THAT MAY BE REQUIRED BY THE ENGINEER.
COMPUTED CUT VOLUME: 1,383,691 CYS
COMPUTED FILL VOLUME: 1,727,100 CYS
IMPORT: 343,409 CYS

H# --- CLV DWG# ---

PROJECT NO. **764-204-013**
DESIGN: **764-204-013**
DRAWN: **764-204-013**
CHECK: **764-204-013**
PLOT TIME: 14:10:36

1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gownengineering.com

GCV
ENGINEERS & SURVEYORS

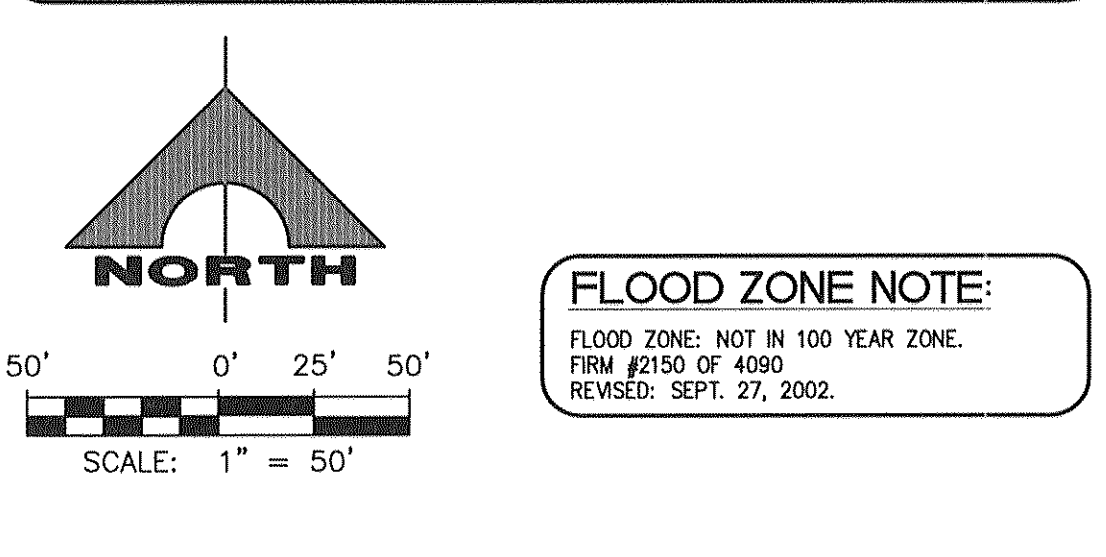
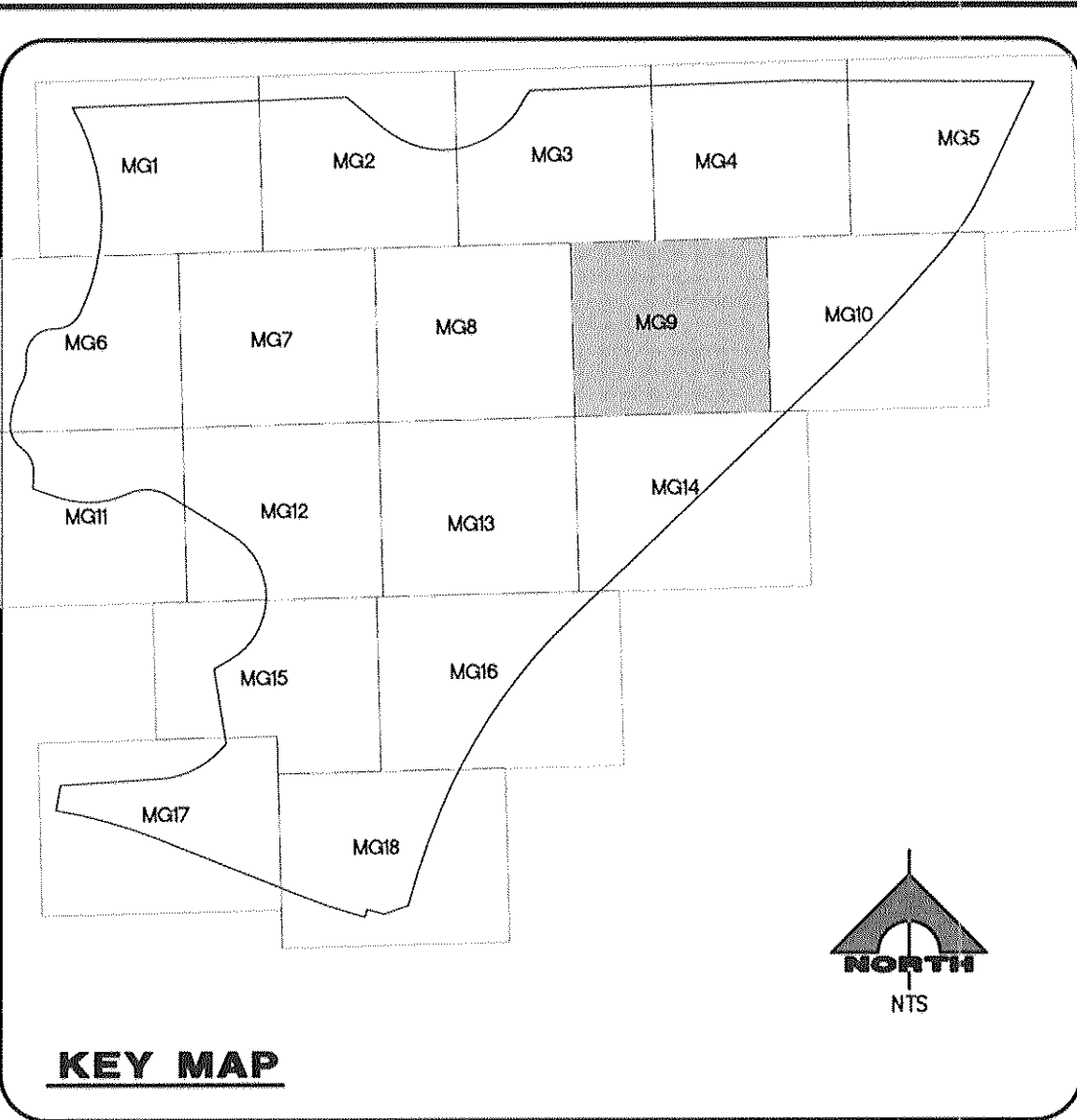
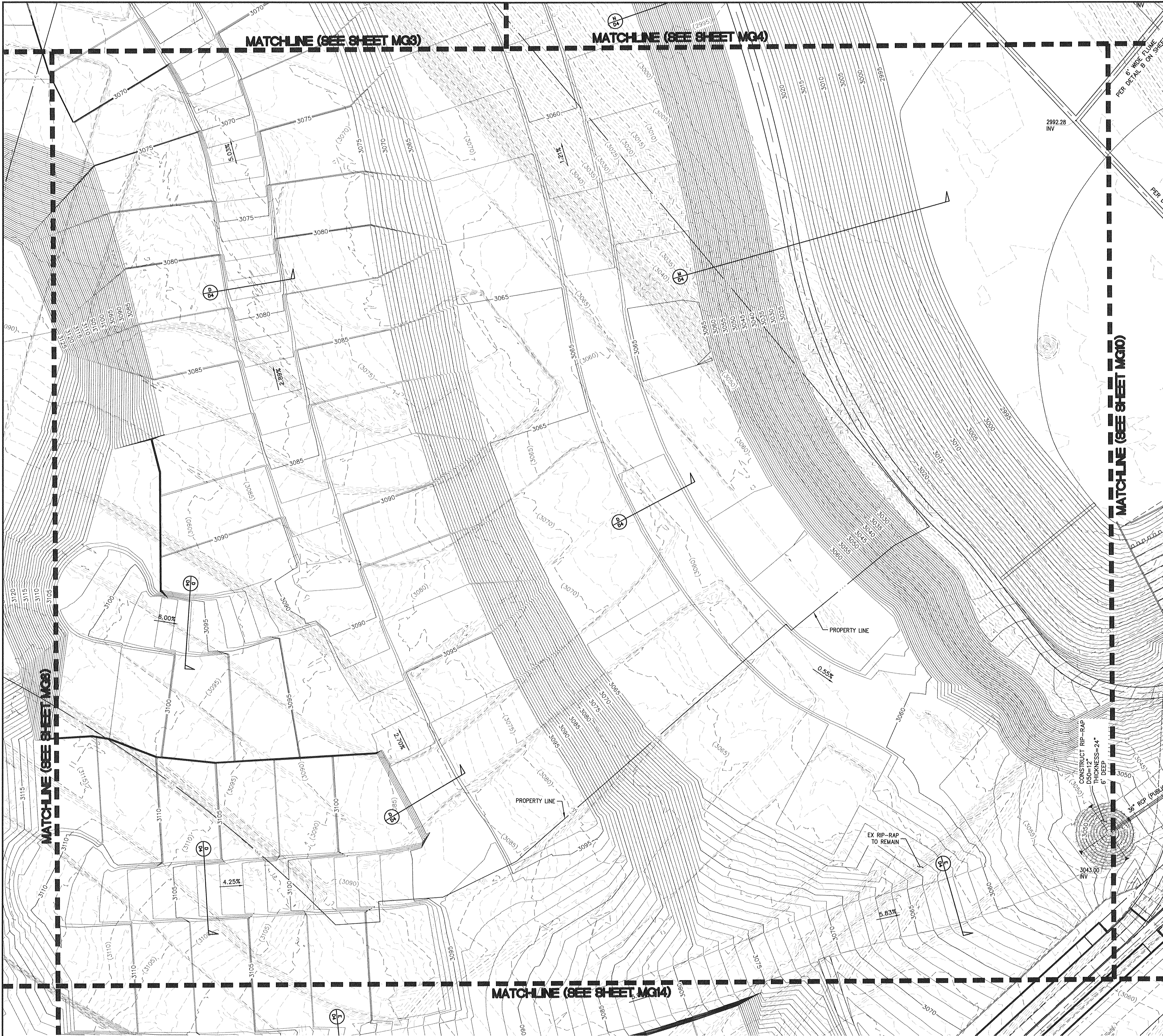
PULTE HOMES

SUMMERLIN VILLAGE 26 - REVERENCE
OFFSITE DRAINAGE IMPROVEMENTS

MASS GRADING PLAN VII

DRAWING
MG8
48 OF 87 SHTS

DATE: 3/17/16
% COMPLETE



NOTE TO CONTRACTOR
CONTRACTOR TO VERIFY ALL EXISTING SEWER, STORM DRAIN, & WATER SIZES, INVERTS AND LOCATIONS. IF A DISCREPANCY EXISTS, CONTRACTOR TO NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION.

BASIS OF BEARING
SOUTH 89°39'55" EAST, BEING THE BEARING OF THE NORTH LINE OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 13, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., AS SHOWN BY MAP THEREOF ON FILE IN FILE 91, PAGE 28 OF PARCEL MAPS IN THE CLARK COUNTY RECORDER'S OFFICE, CLARK COUNTY, NEVADA.

BENCHMARK
CITY OF LAS VEGAS BENCHMARK #0368.3
USC&GS DISC SET IN ROCK EAST OF CHARLESTON SOUTH OF DETENTION BASIN
ELEV (NAVD 88) = 989.5990 METERS
3246.71 U.S. SURVEY FEET
SUMMERLIN WEST: CLV NAVD 88/93
ELEV = 989.5703 METERS
3246.62 U.S. SURVEY FEET

GENERAL NOTES
1. SEE THE UTILITY PLANS (SHEETS U1-U18) FOR WATER LINE DESIGN AND CONSTRUCTION INFORMATION.
2. FOR CONSTRUCTION NOTES SEE SHEET C2.

NOTE:
ALL EXISTING UTILITIES SHOWN FOR GRAPHICAL PURPOSES ONLY. CONTRACTOR RESPONSIBLE FOR UTILITY LOCATE AND VERIFICATION ENGINEER MUST BE NOTIFIED OF ANY DESPEENCY.

FLOOD ZONE NOTE:
FLOOD ZONE: NOT IN 100 YEAR ZONE. FIRM PANEL #2150 OF 4090 REVISED: SEPT. 27, 2002.



DRAINAGE CERTIFICATION
I CERTIFY THAT THE GRADING PLANS ARE IN CONFORMANCE WITH THE APPROVED DRAINAGE STUDY ON FILE AT THE CITY OF LAS VEGAS FOR THIS PROJECT.
WESLEY T. PETTY P.E. 16369 DATE 3/17/14

ENGINEER'S EVALUATION OF GRADING QUANTITIES
PLEASE NOTE: THESE QUANTITIES ARE ESTIMATES ONLY. ACTUAL QUANTITIES MAY DIFFER FROM THE ESTIMATE DUE TO SOILS VARIATIONS IN THE FIELD. VOLUMES CALCULATED WITHOUT SHRINKAGE OR SUBSIDENCE FACTORS AND DO NOT INCLUDE OVEREXCAVATION REQUIRED FOR THE REMOVAL OF CALICHE OR ANY OTHER UNDESIRABLE MATERIALS. REFER TO THE SOILS REPORT FOR THESE AREAS. ALSO NOT INCLUDED ARE QUANTITIES FOR ADDITIONAL DITCHES & BERMS NOT SHOWN THAT MAY BE REQUIRED BY THE ENGINEER.
COMPUTED CUT VOLUME: 1,383,691 CYS
COMPUTED FILL VOLUME: 1,727,100 CYS
IMPORT: 343,409 CYS

Professional Engineer Seal for Wesley T. Petty, State of Nevada, License No. 16369, dated 12-31-15.

PROJECT NO.	764-204-013
DESIGN:	
DRAWN:	
CHECK:	
PLOT DATE:	03-17-16
PLOT TIME:	14:10:30

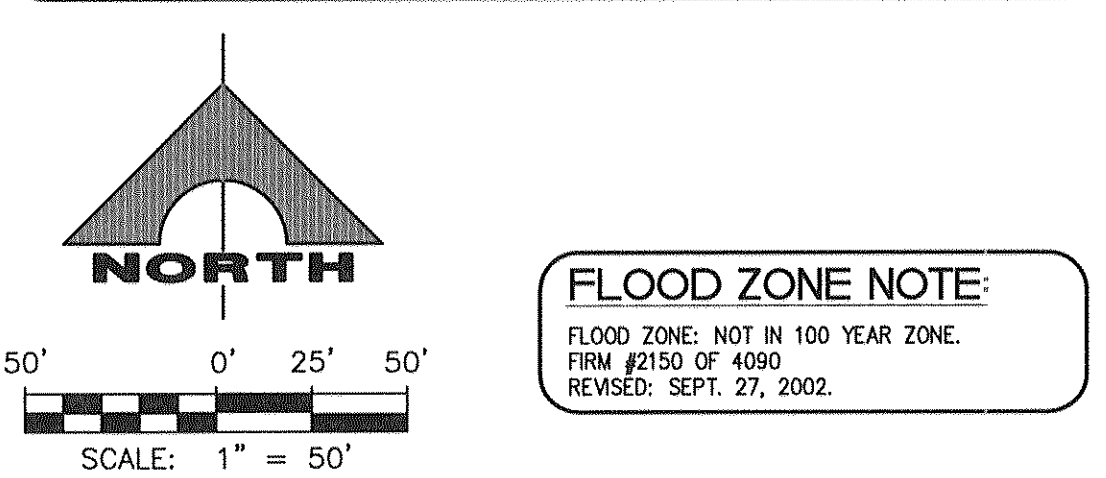
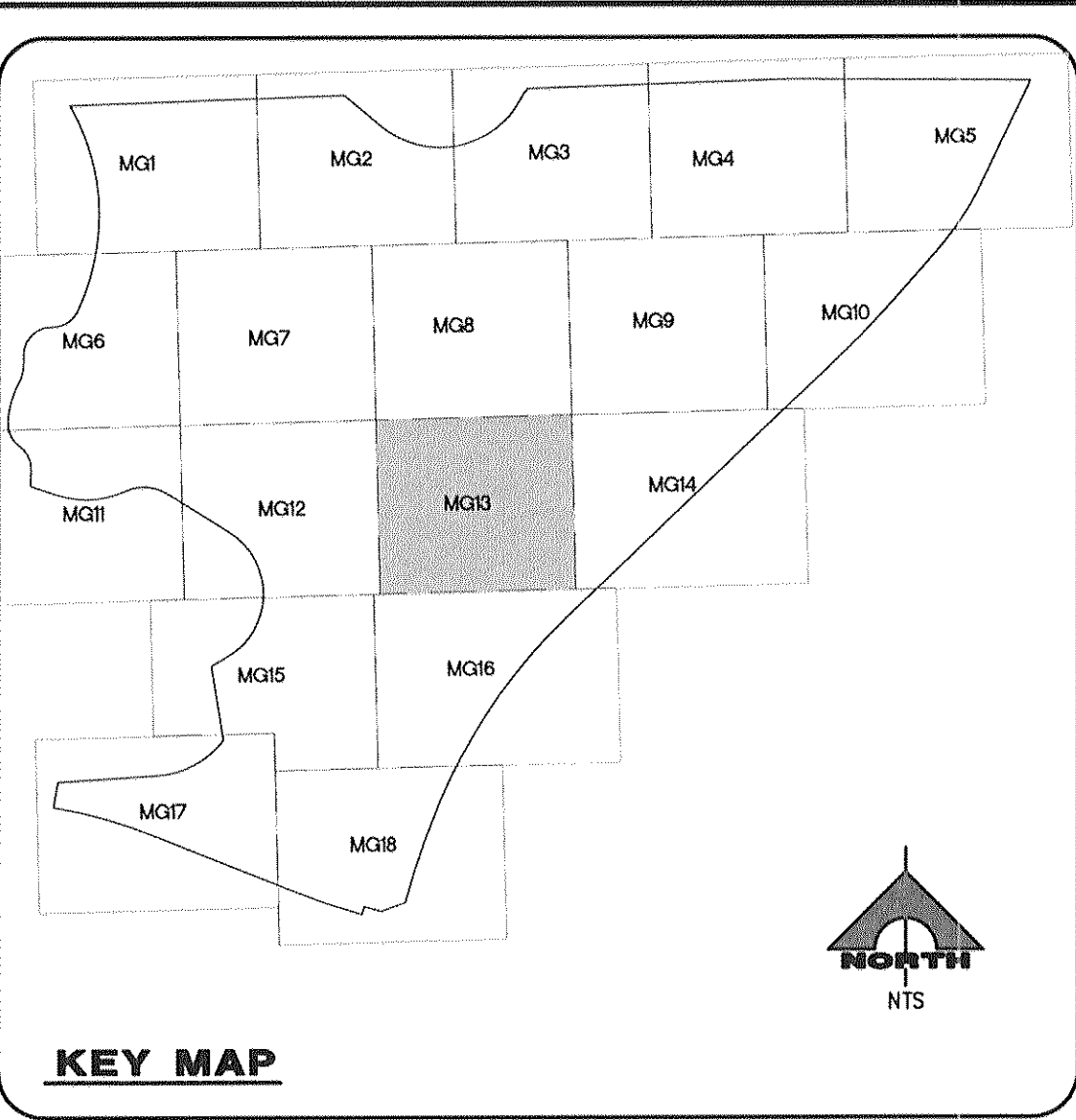
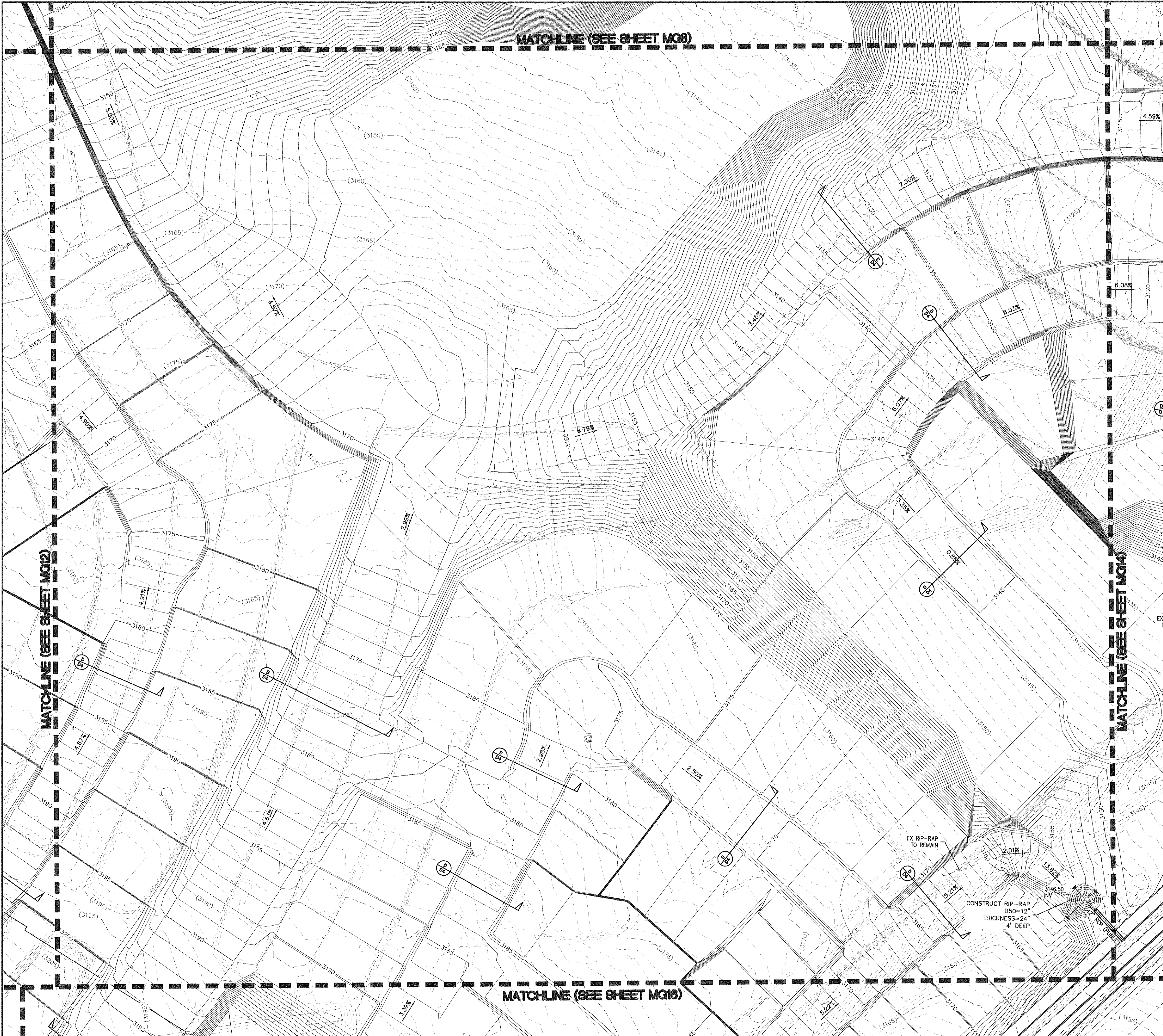
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcwengineering.com

GCW' ENGINEERS & SURVEYORS

PULTE HOMES
SUMMERLIN VILLAGE 26 - REVERENCE
OFFSITE DRAINAGE IMPROVEMENTS

MASS GRADING PLAN IX

DRAWING
MG9
49 OF 87 SHTS



FLOOD ZONE NOTE:
FLOOD ZONE: NOT IN 100 YEAR ZONE.
FIRM #2150 OF 4000
REVISED: SEPT. 27, 2002.

NOTE TO CONTRACTOR

CONTRACTOR TO VERIFY ALL EXISTING SEWER, STORM DRAIN, & WATER SIZES, INVERTS AND LOCATIONS. IF A DISCREPANCY EXISTS, CONTRACTOR TO NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION.

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SOUTH 89°39'55" EAST, BEING THE BEARING OF THE NORTH LINE OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 13, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., AS SHOWN BY MAP THEREOF ON FILE IN FILE 91, PAGE 28 OF PARCEL MAPS IN THE CLARK COUNTY RECORDER'S OFFICE, CLARK COUNTY, NEVADA.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK #0368.3
US&GS DISC SET IN ROCK EAST OF CHARLESTON SOUTH OF DETENTION BASIN
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3246.71 U.S. SURVEY FEET
SUMMERLIN WEST: CLV NAVD 88/93
ELEV = 989.5703 METERS
3246.62 U.S. SURVEY FEET

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- FOR CONSTRUCTION NOTES SEE SHEET C2.

NOTE:

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FLOOD ZONE NOTE:

FLOOD ZONE: NOT IN 100 YEAR ZONE.
FIRM PANEL #2150 OF 4000
REVISED: SEPT. 27, 2002.



DRAINAGE CERTIFICATION

I CERTIFY THAT THE GRADING PLANS ARE IN CONFORMANCE WITH THE APPROVED DRAINAGE STUDY ON FILE AT THE CITY OF LAS VEGAS FOR THIS PROJECT.

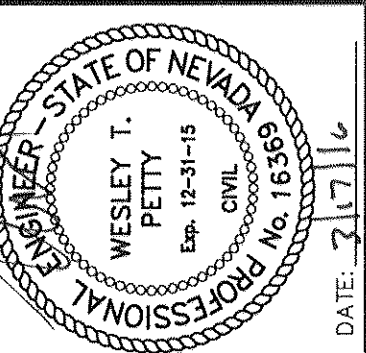
WESLEY T. PETTY P.E. 16369 DATE 3/7/16

ENGINEER'S EVALUATION OF GRADING QUANTITIES

PLEASE NOTE THESE QUANTITIES ARE ESTIMATES ONLY. ACTUAL QUANTITIES MAY DIFFER FROM THE ESTIMATE DUE TO SOILS VARIATIONS IN THE FIELD. VOLUMES CALCULATED WITHOUT SHRINKAGE OR SUBSIDENCE FACTORS AND DO NOT INCLUDE OVEREXCAVATION REQUIRED FOR THE REMOVAL OF GAULCH OR ANY OTHER UNDESIRABLE MATERIALS. REFER TO THE SOILS REPORT FOR THESE AREAS. ALSO NOT INCLUDED ARE QUANTITIES FOR ADDITIONAL DITCHES & BERMS NOT SHOWN THAT MAY BE REQUIRED BY THE ENGINEER.

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COMPUTED FILL VOLUME: 1,727,100 CYS
IMPORT: 343,409 CYS

H# --- CLV DWG# ---

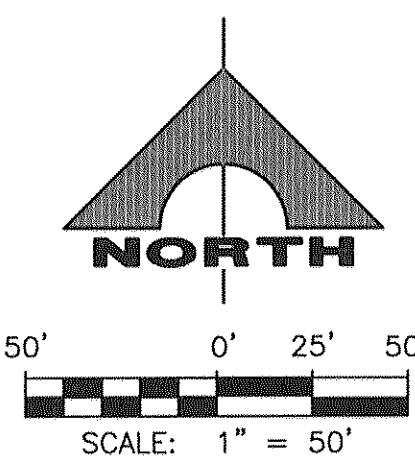
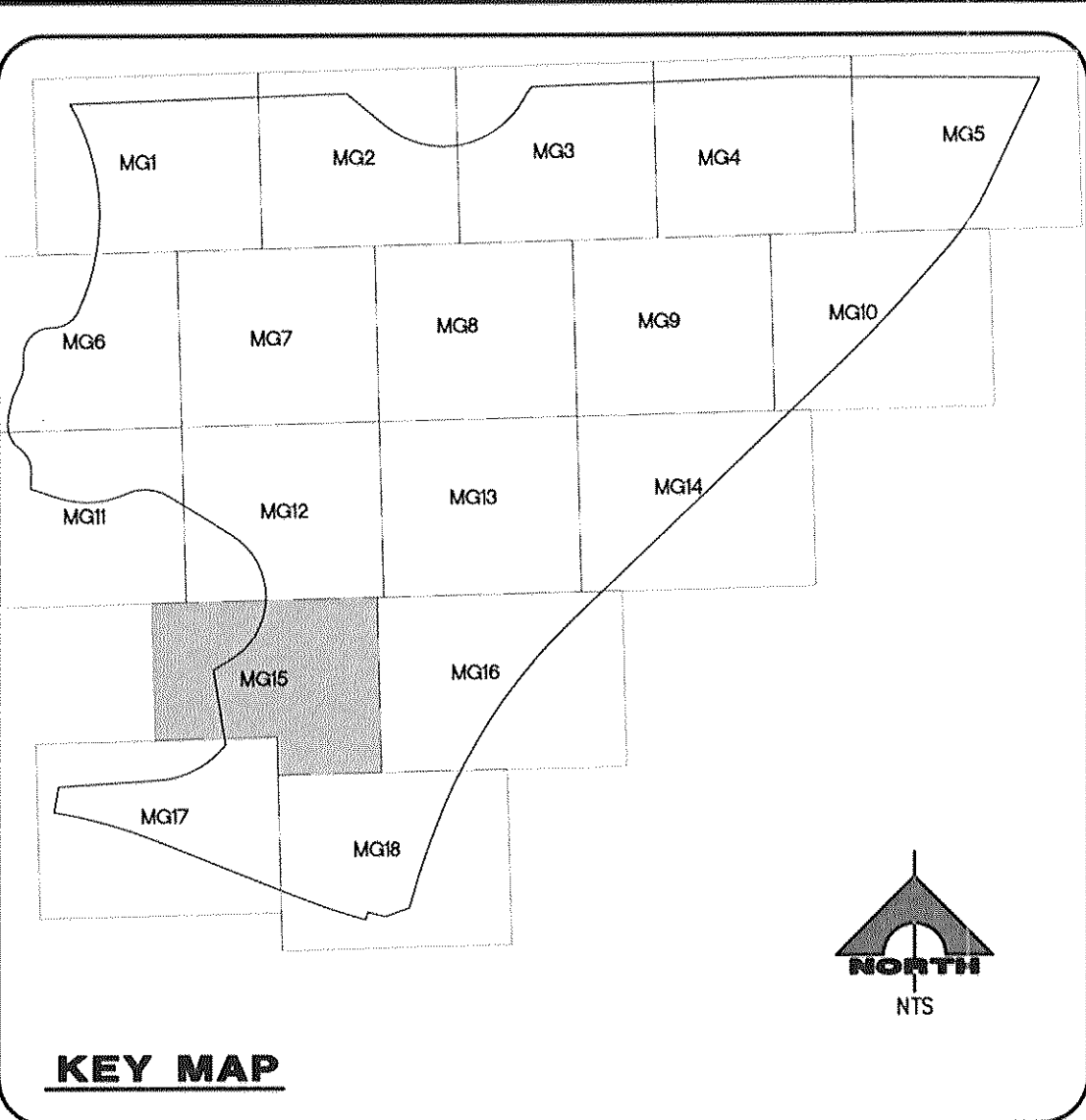
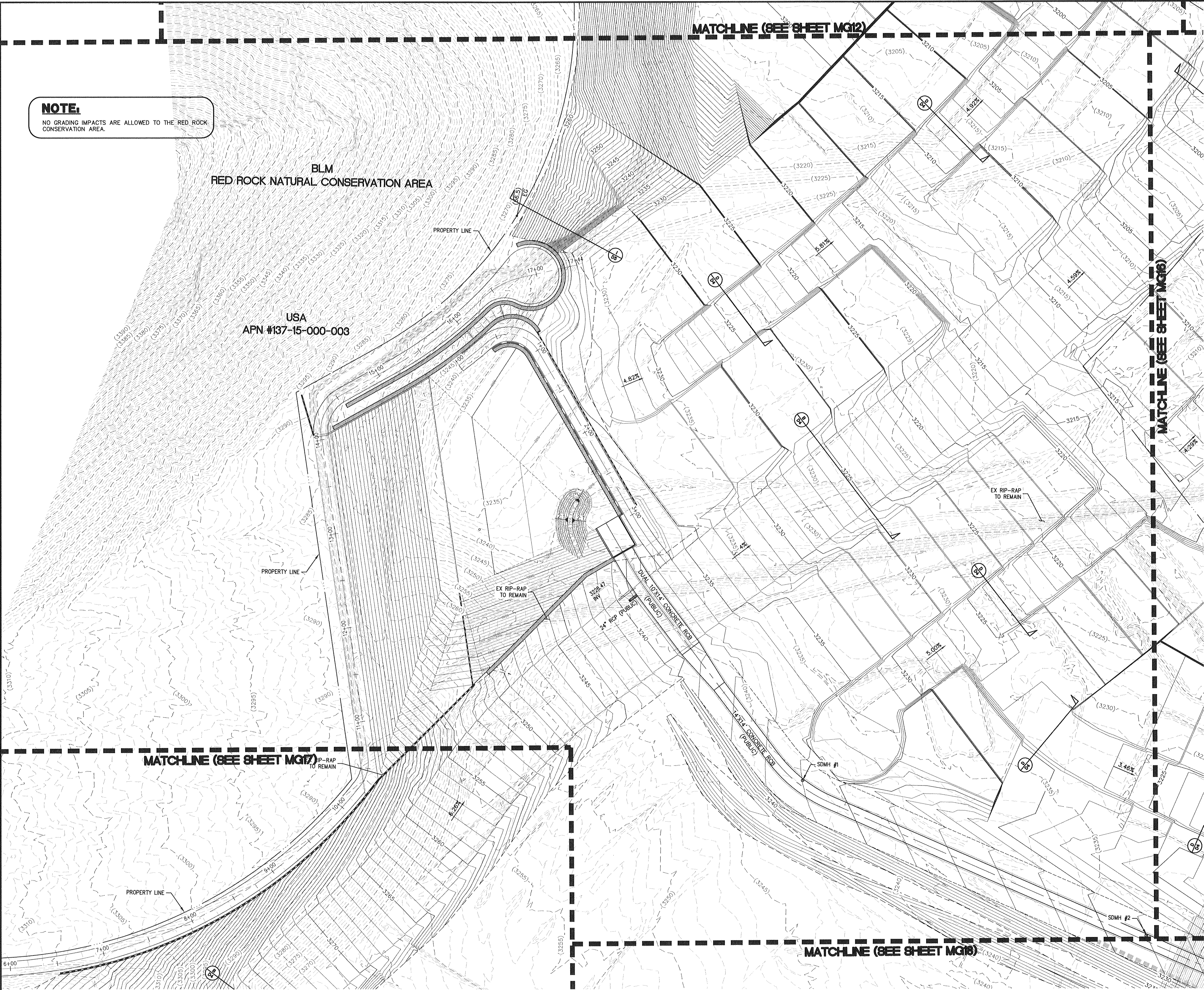


DATE	REV	DESCRIPTION
3/7/16	1	COMPLETE

PROJECT NO.	764-204-013
DESIGN:	
DRAWN:	
CHECK:	
PLOT DATE: 03-17-16	
PLOT TIME: 14:10:05	

GCV'
ENGINEERS & SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcvengineering.com

PULTE HOMES
SUMMERLIN VILLAGE 26 - REVERENCE
OFFSITE DRAINAGE IMPROVEMENTS
MASS GRADING PLAN XII
DRAWING
MG13
53 OF 87 SHTS



FLOOD ZONE NOTE:
FLOOD ZONE: NOT IN 100 YEAR ZONE.
FIRM #2150 OF 4090
REVISED: SEPT. 27, 2002.

NOTE TO CONTRACTOR

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BENCHMARK

CITY OF LAS VEGAS BENCHMARK #0368.3
USC&GS DISC SET IN ROCK EAST OF CHARLESTON SOUTH OF DETENTION BASIN

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3246.71 U.S. SURVEY FEET

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GENERAL NOTES

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- FOR CONSTRUCTION NOTES SEE SHEET C2.

NOTE:

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FLOOD ZONE NOTE:

FLOOD ZONE: NOT IN 100 YEAR ZONE.
FIRM PANEL #2150 OF 4090
REVISED: SEPT 27, 2002.



DRAINAGE CERTIFICATION

I CERTIFY THAT THE GRADING PLANS ARE IN CONFORMANCE WITH THE APPROVED DRAINAGE STUDY ON FILE AT THE CITY OF LAS VEGAS FOR THIS PROJECT.

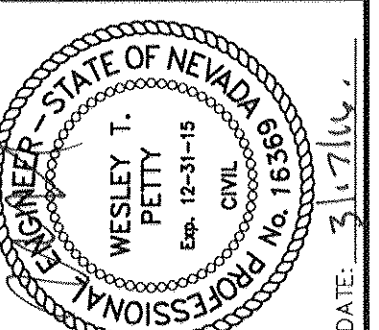
WESLEY T. PETTY P.E. 16369 DATE 3/7/16

ENGINEER'S EVALUATION OF GRADING QUANTITIES

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COMPUTED CUT VOLUME: 1,383,691 CYS
COMPUTED FILL VOLUME: 1,727,100 CYS
IMPORT: 343,409 CYS

H# CLV DWG#



DATE	REV	DESCRIPTION
3/7/16	1	100% COMPLETE

PROJECT NO.
764-204-013

DESIGN:
DRAWN:
CHECK:
PLOT DATE: 03-17-16
PLOT TIME: 14:09:52

GCV
ENGINEERS & SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcvengineering.com

F:\PROJECTS\760\764-204-013\DWG\PRODUCTION\05 DRAINAGE\013MG15.DWG
PHD NGSTEN

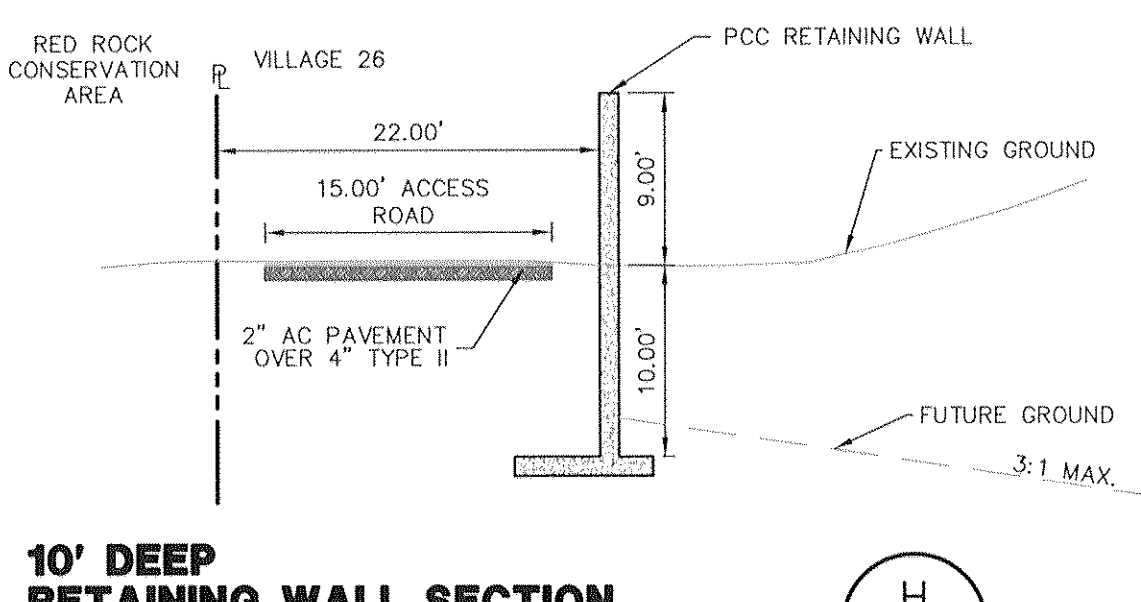
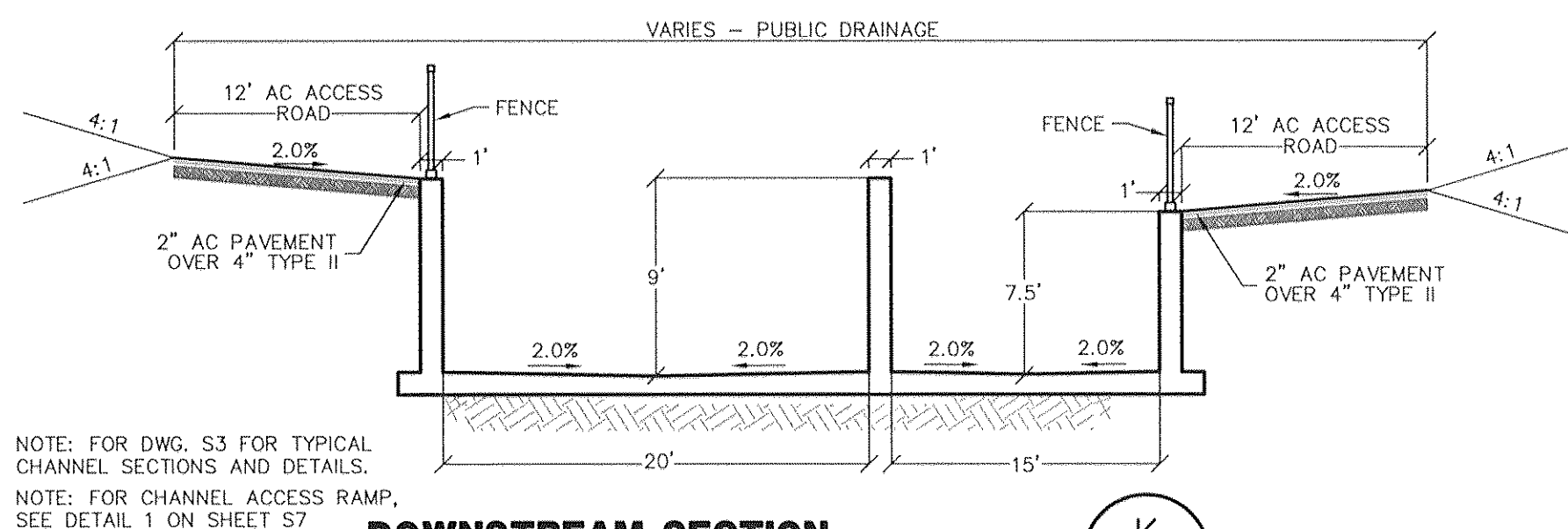
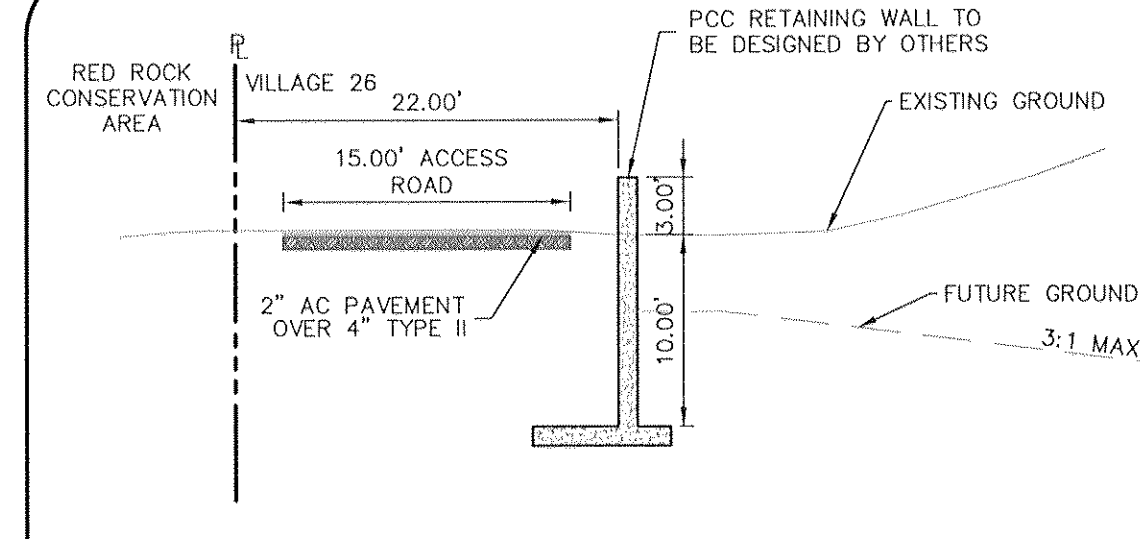
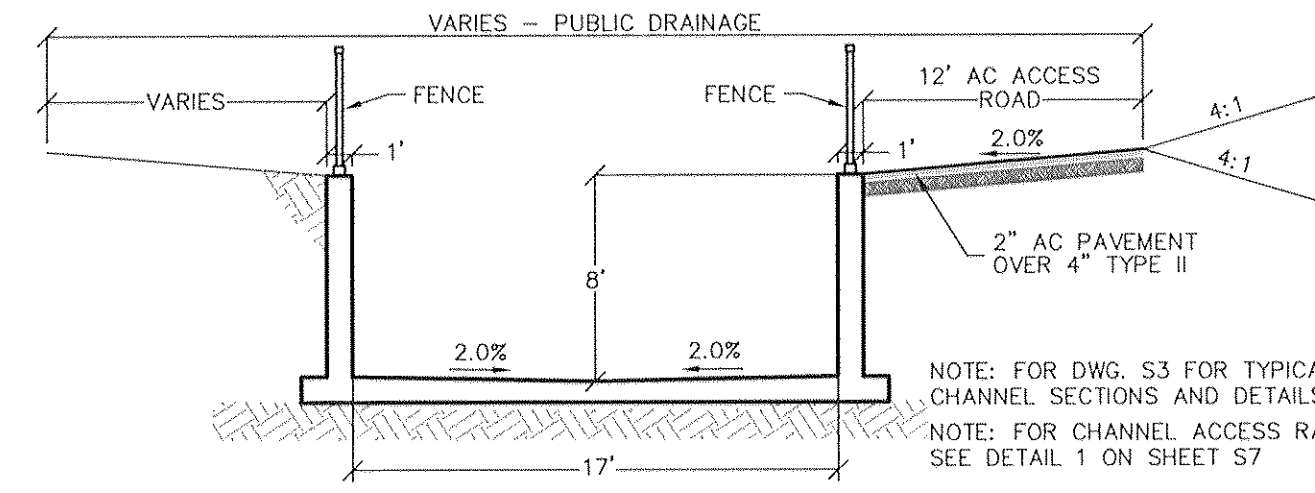
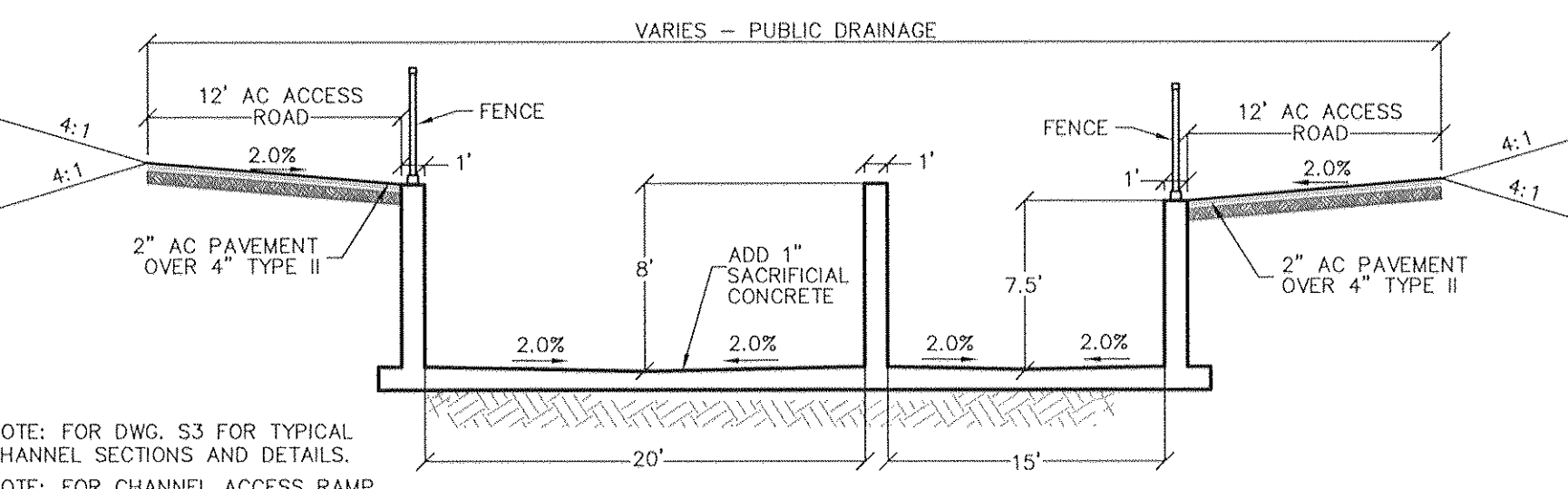
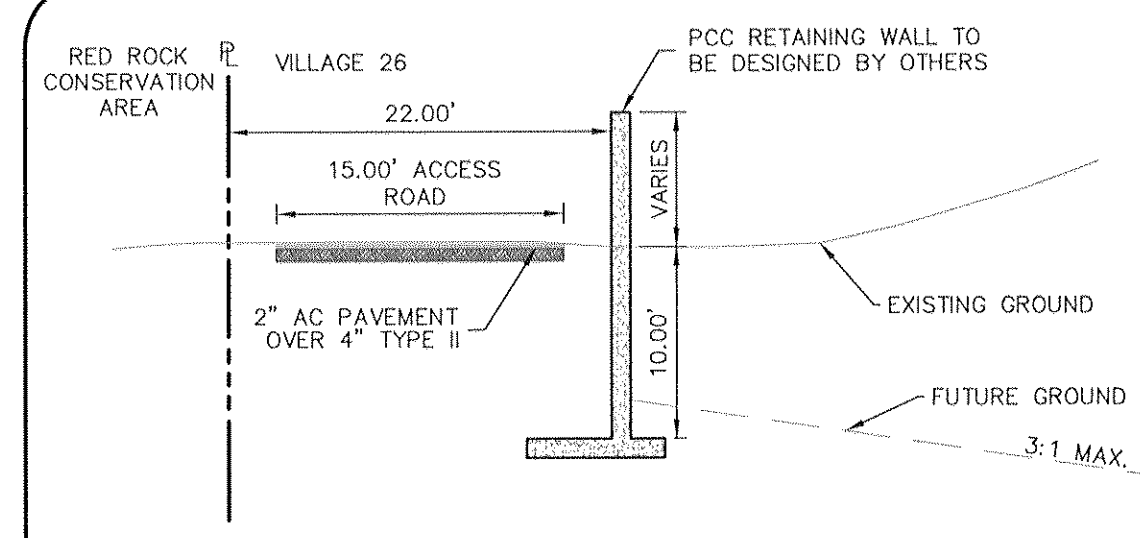
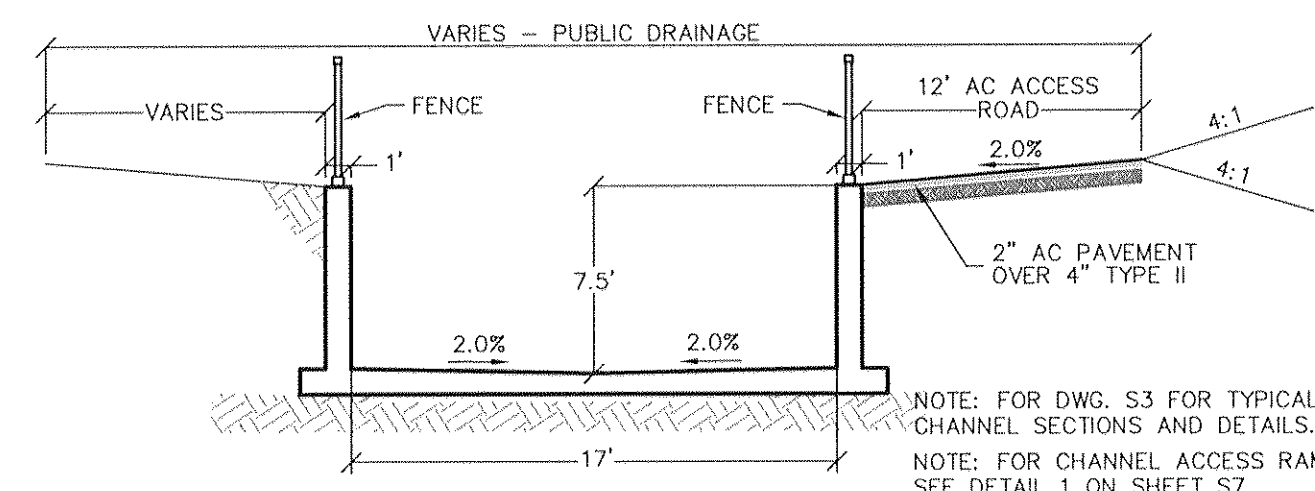
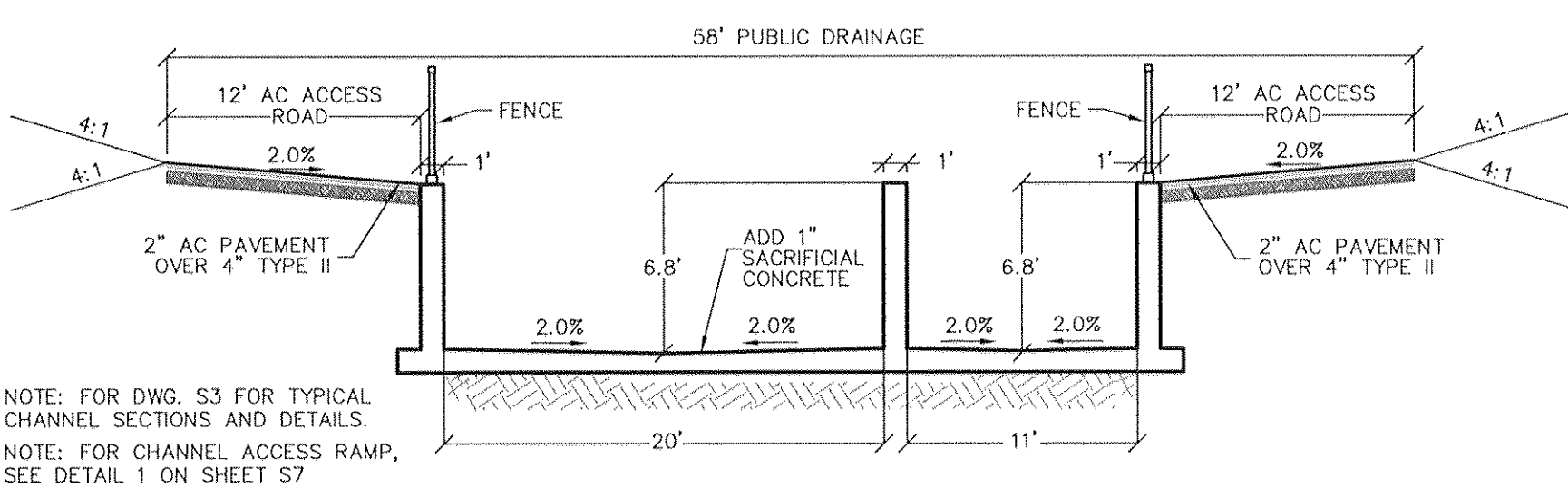
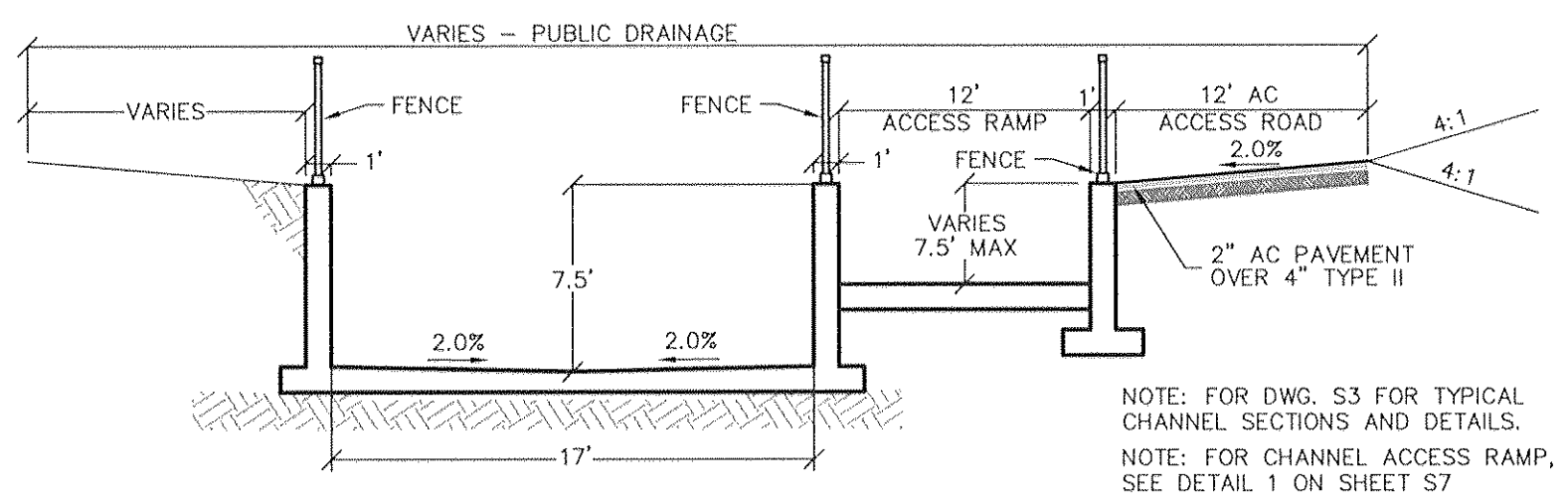
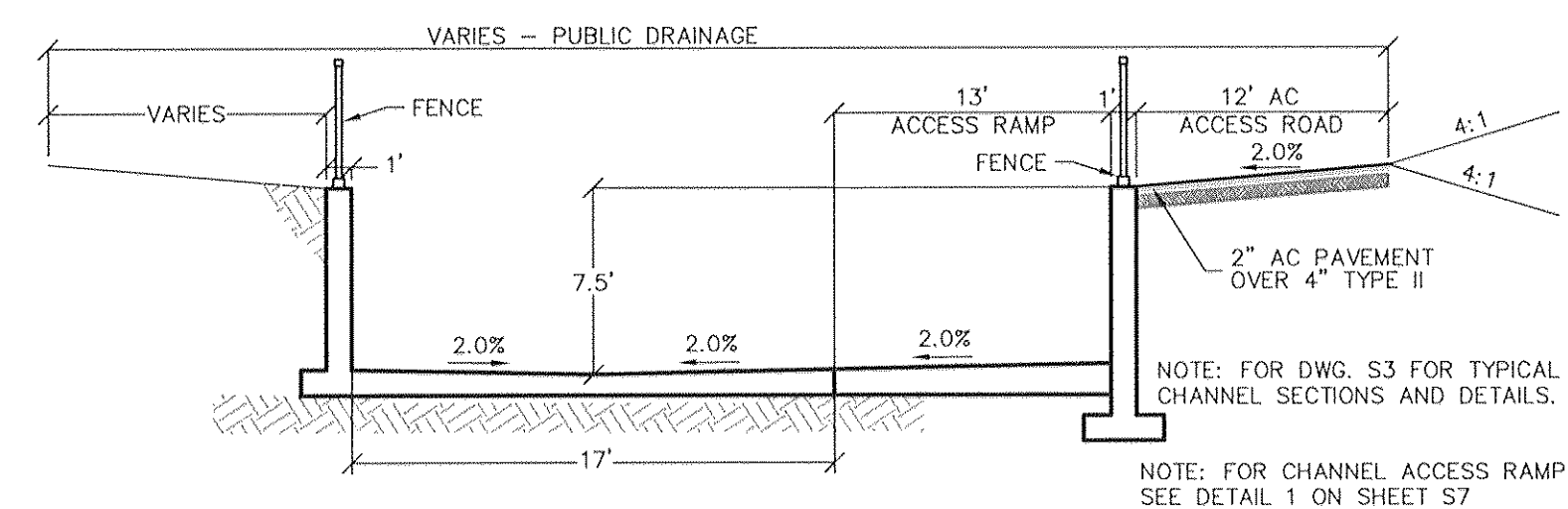
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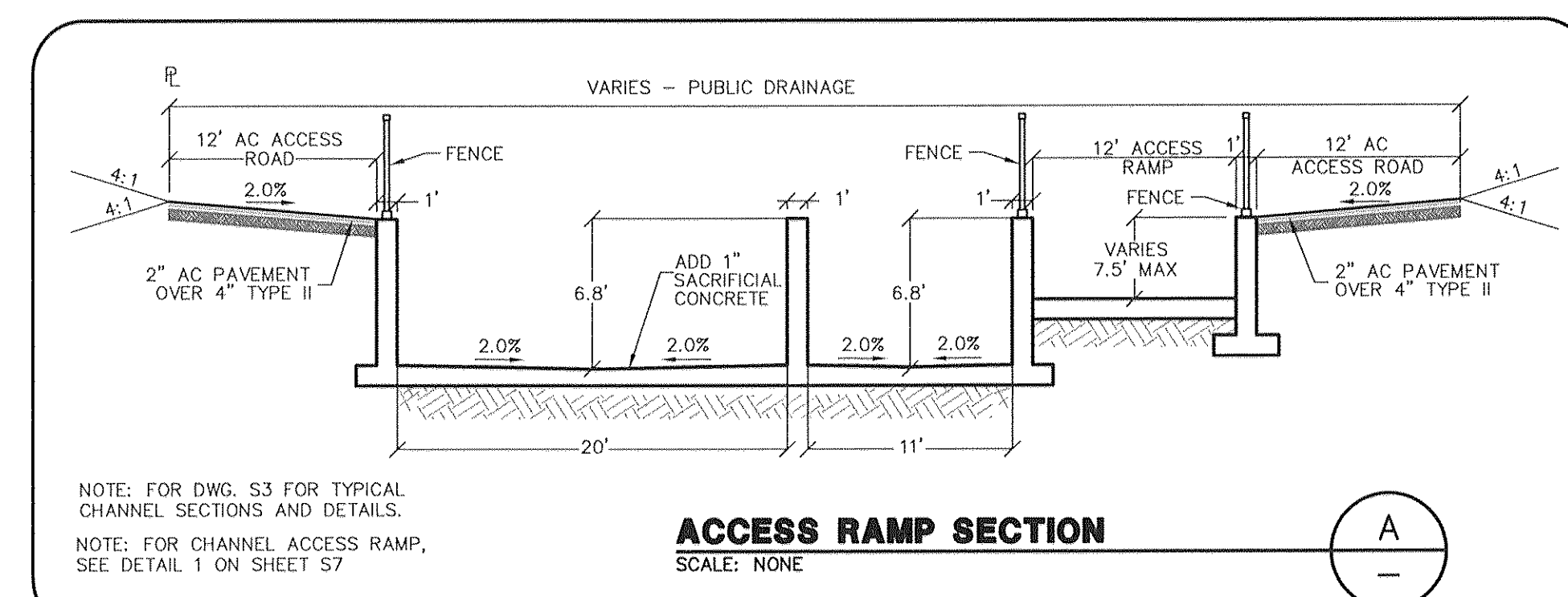
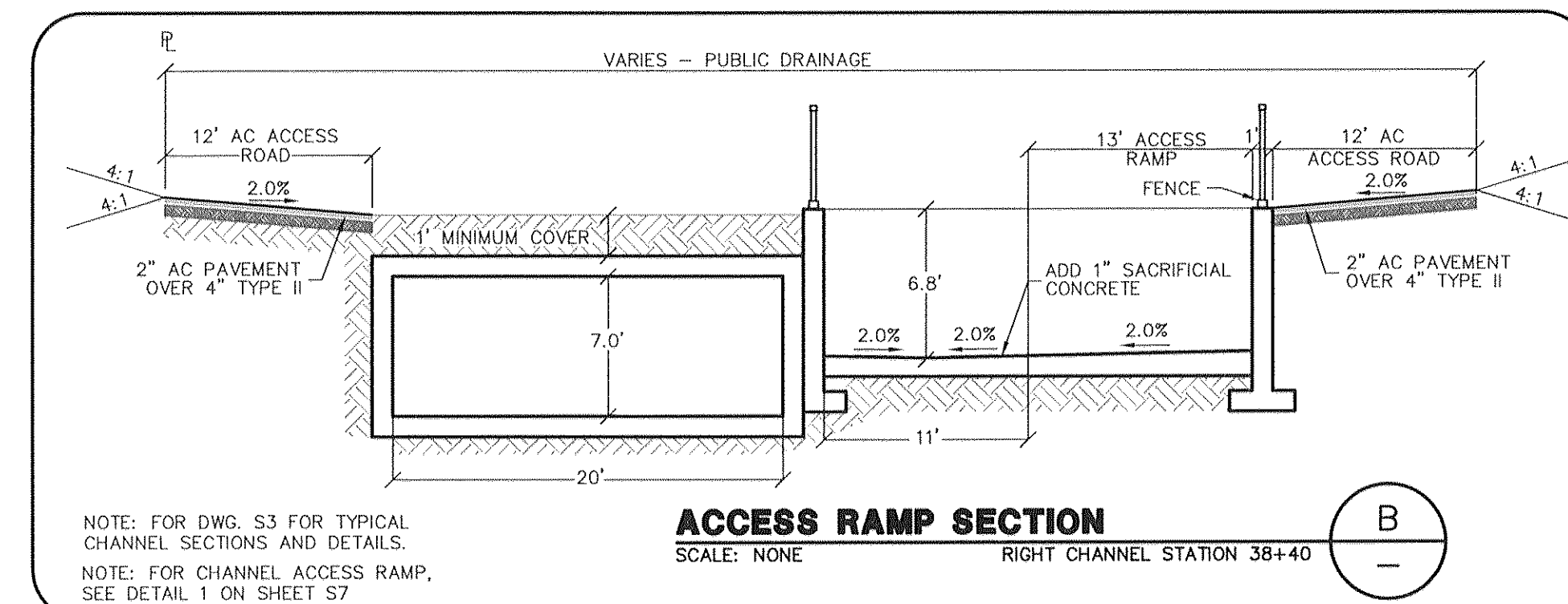
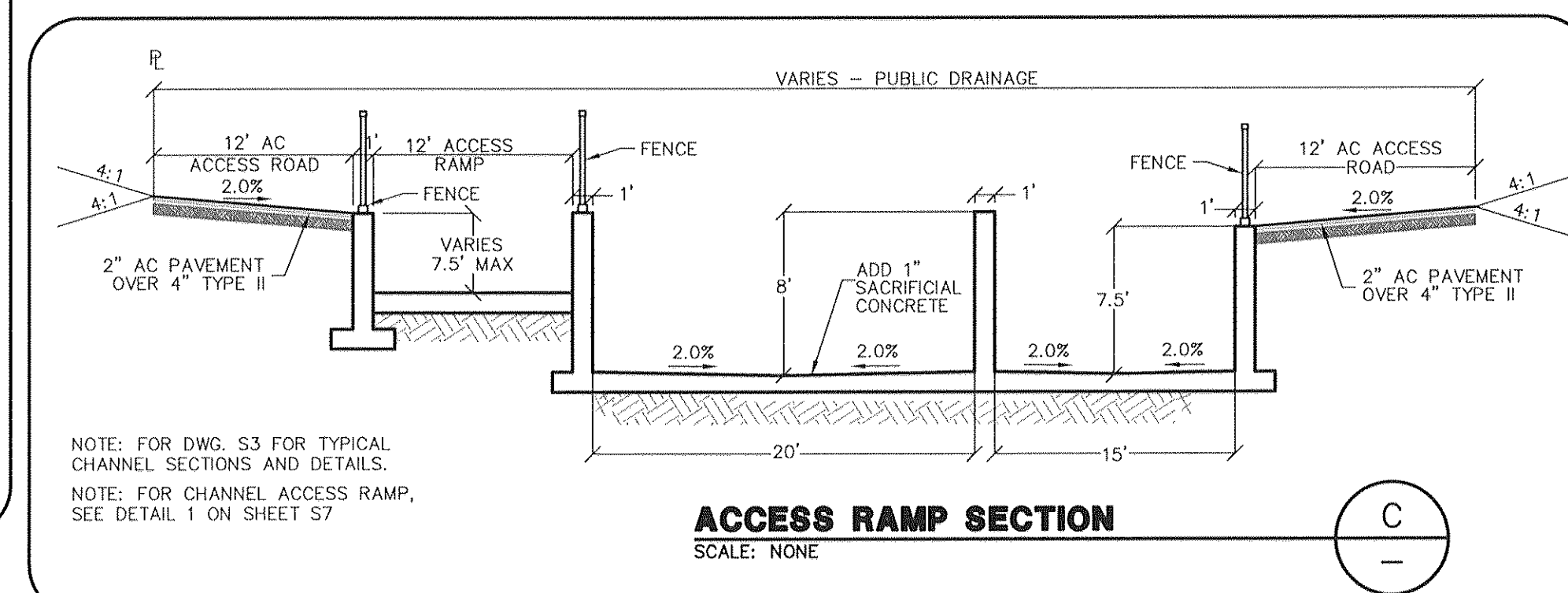
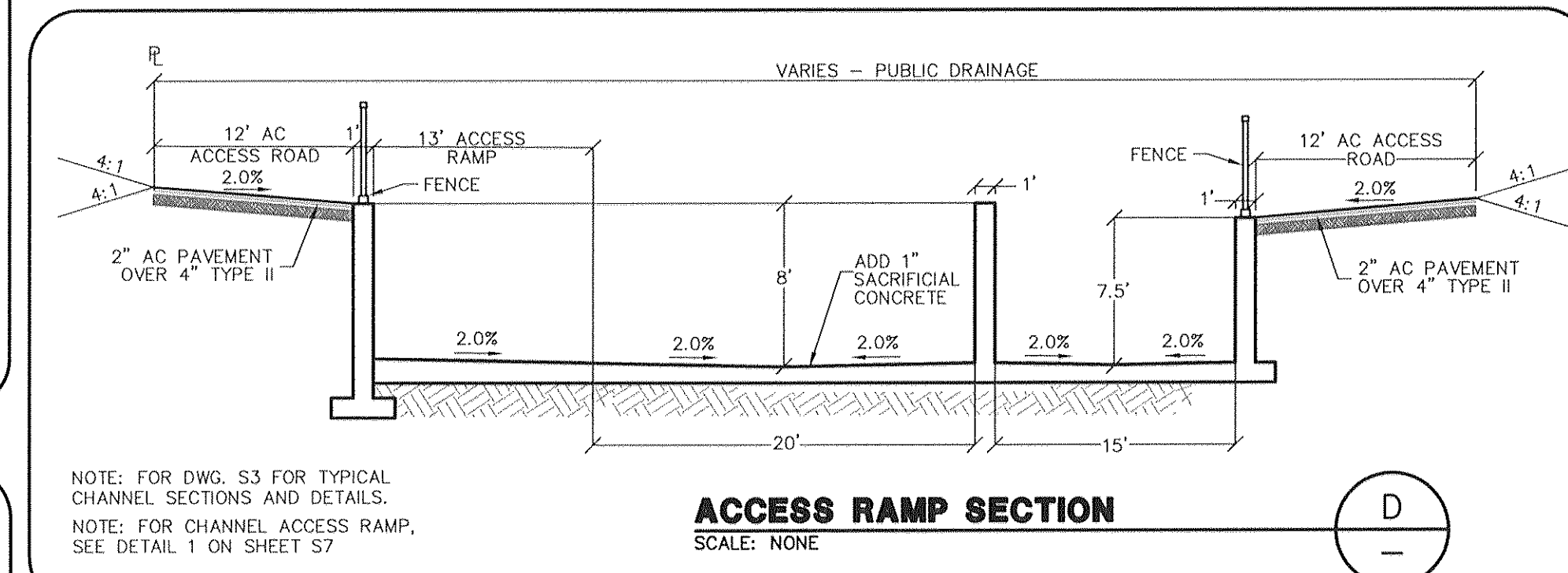
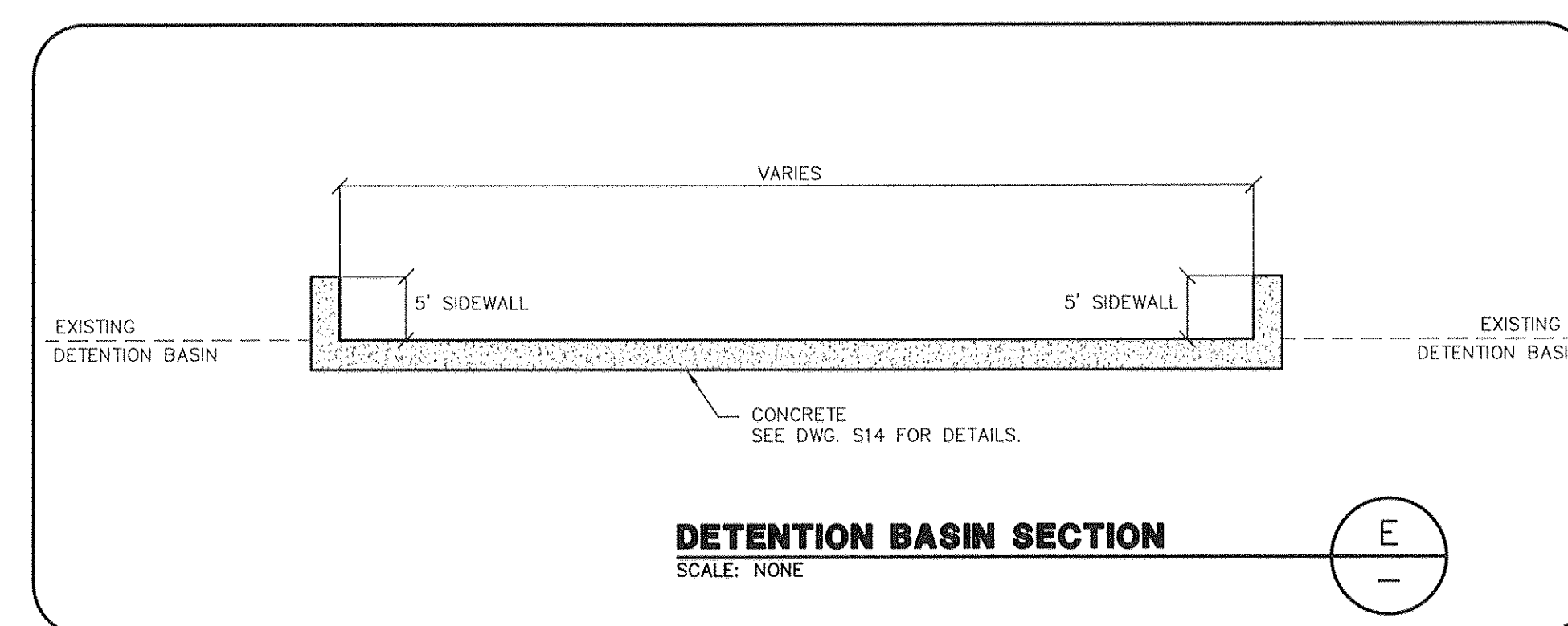
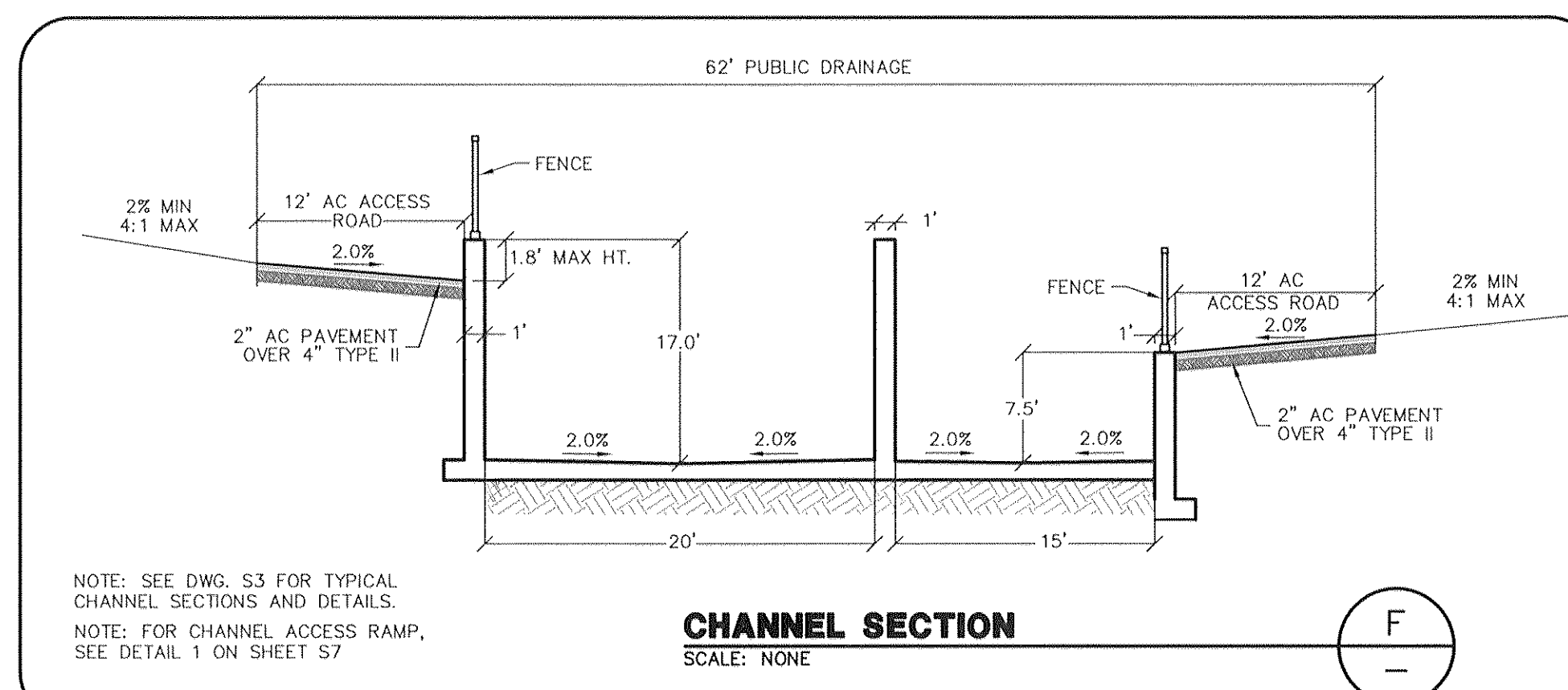
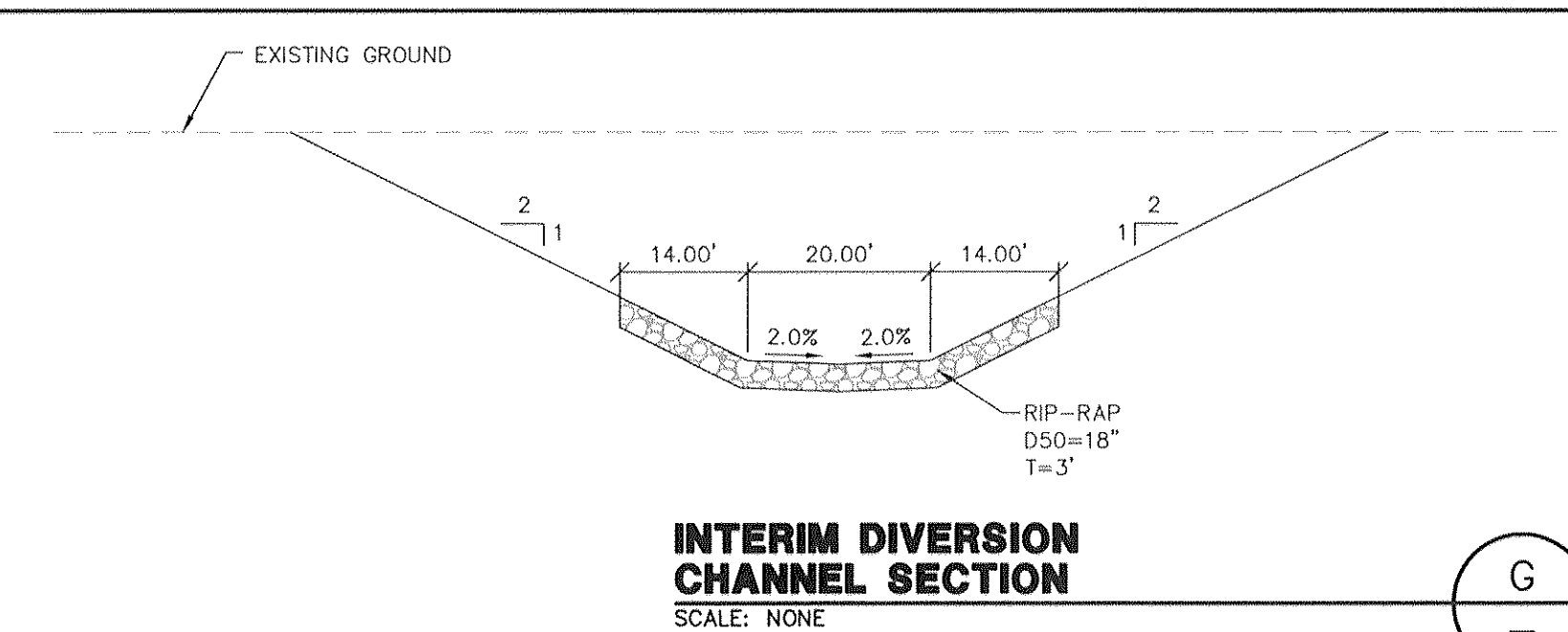
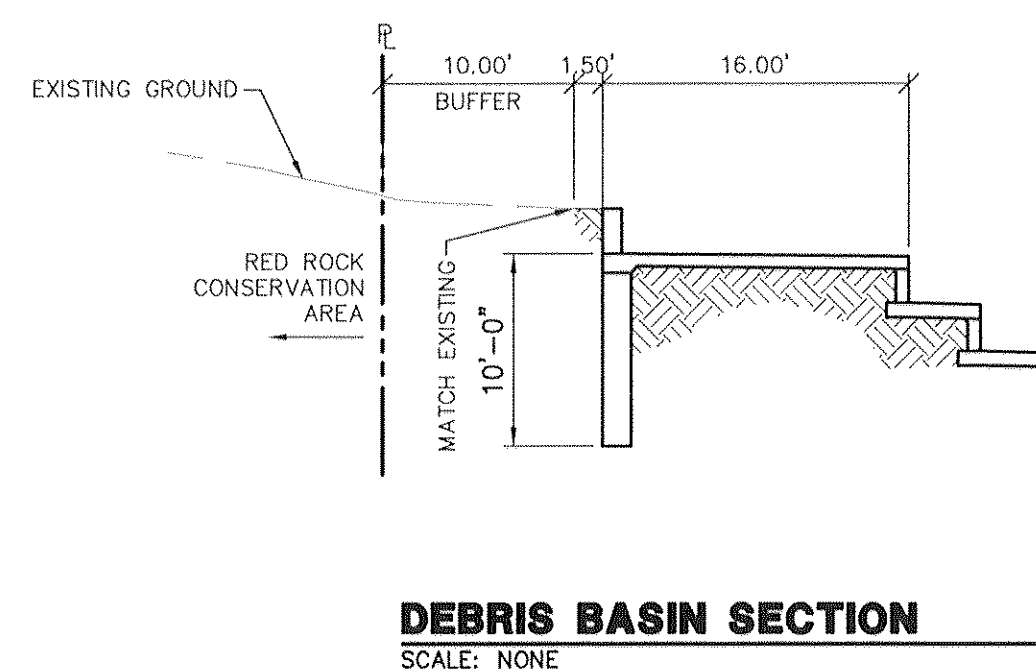
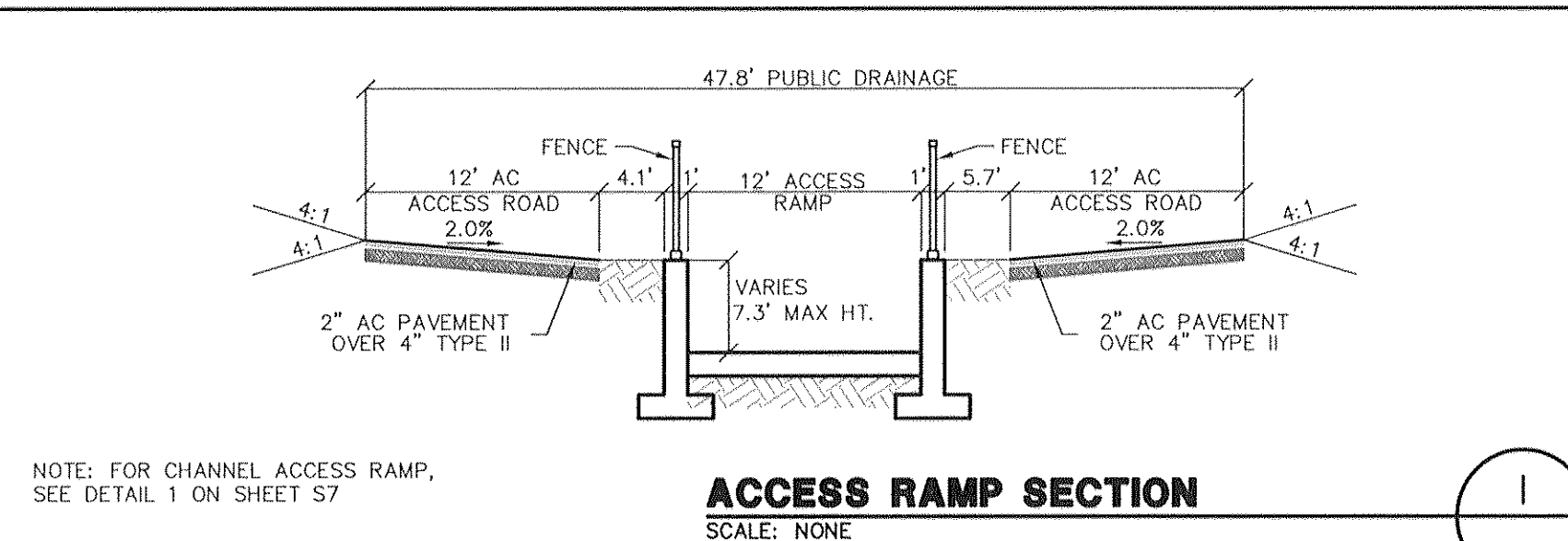
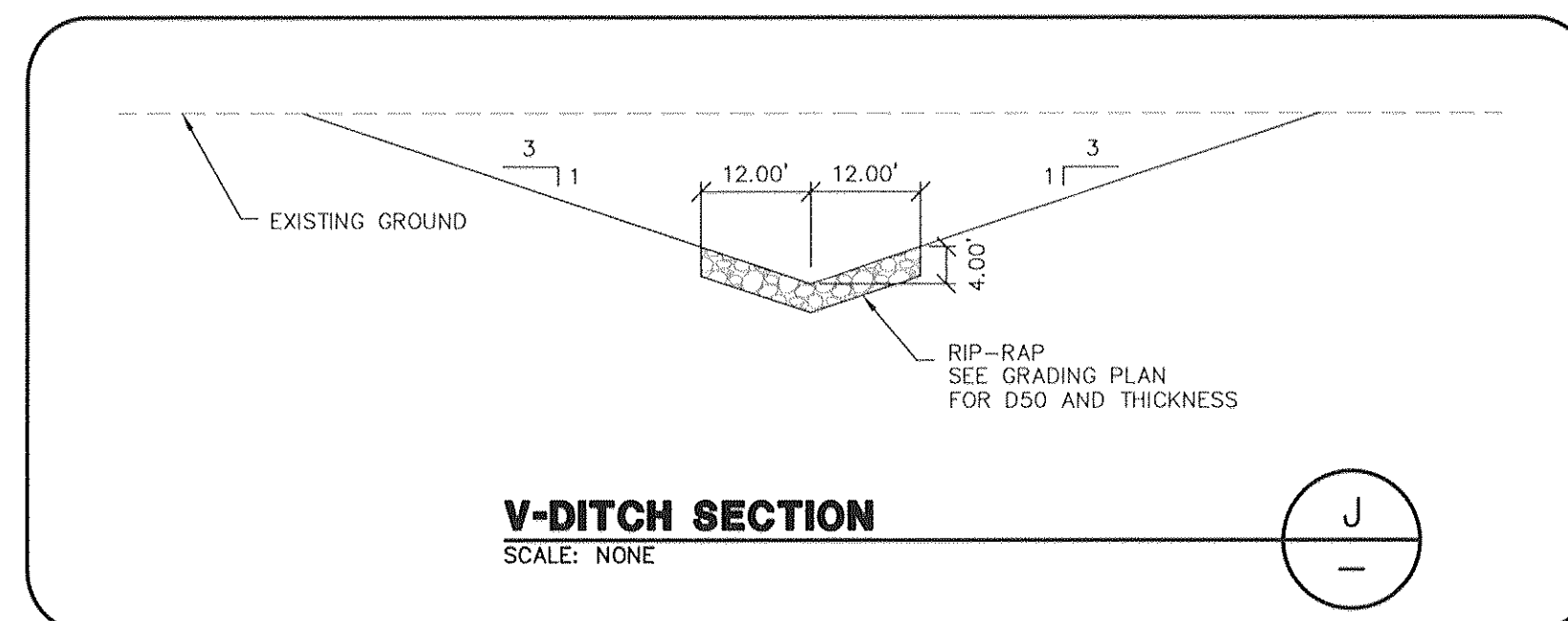
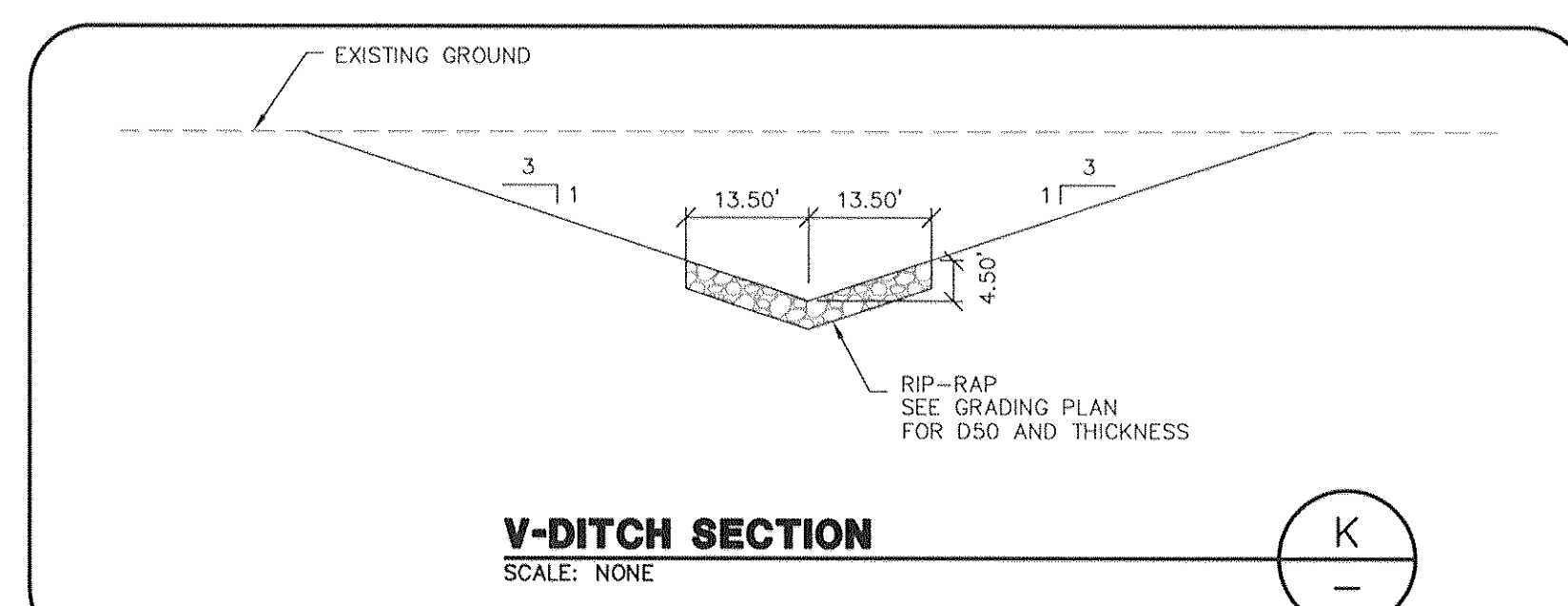
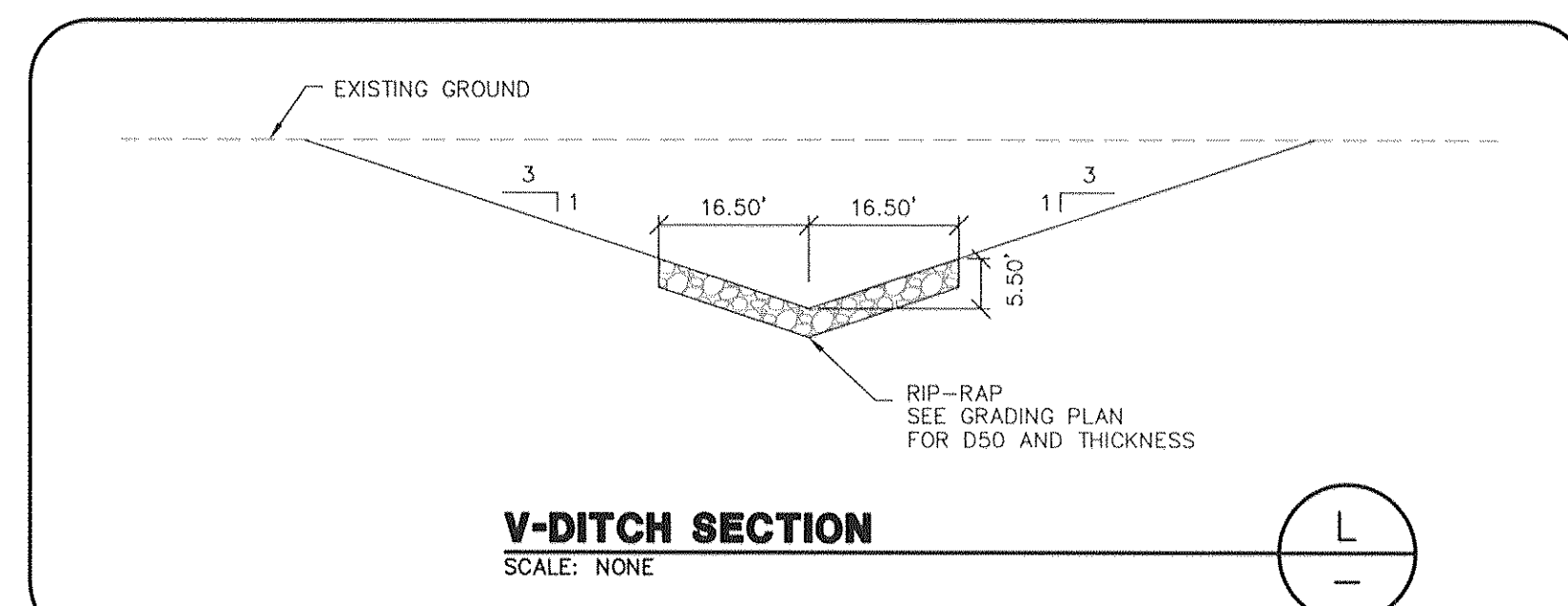
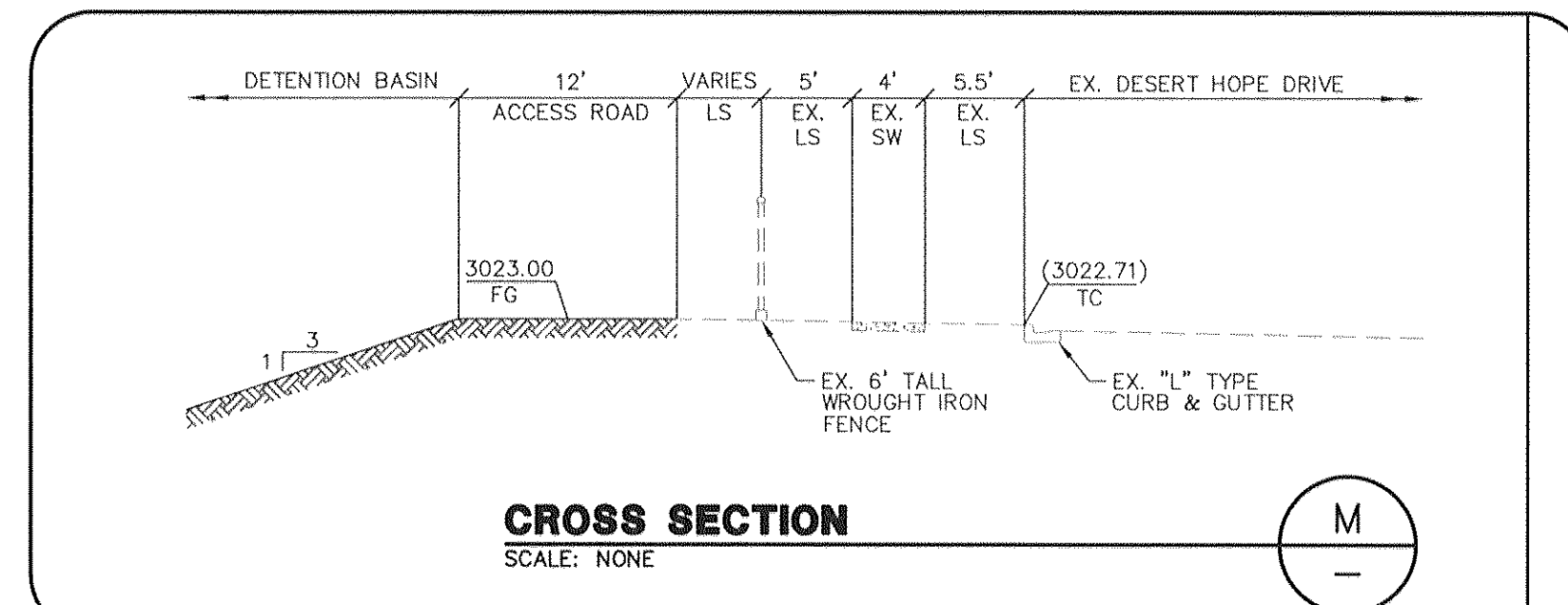
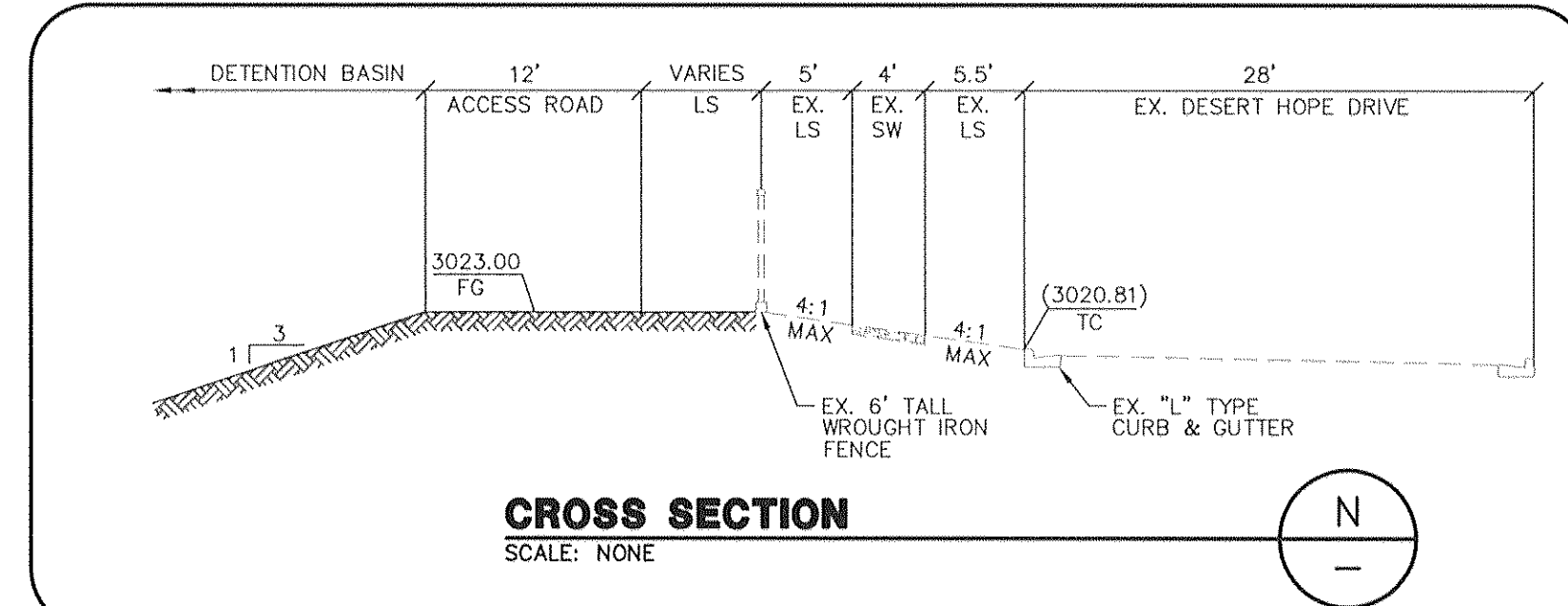
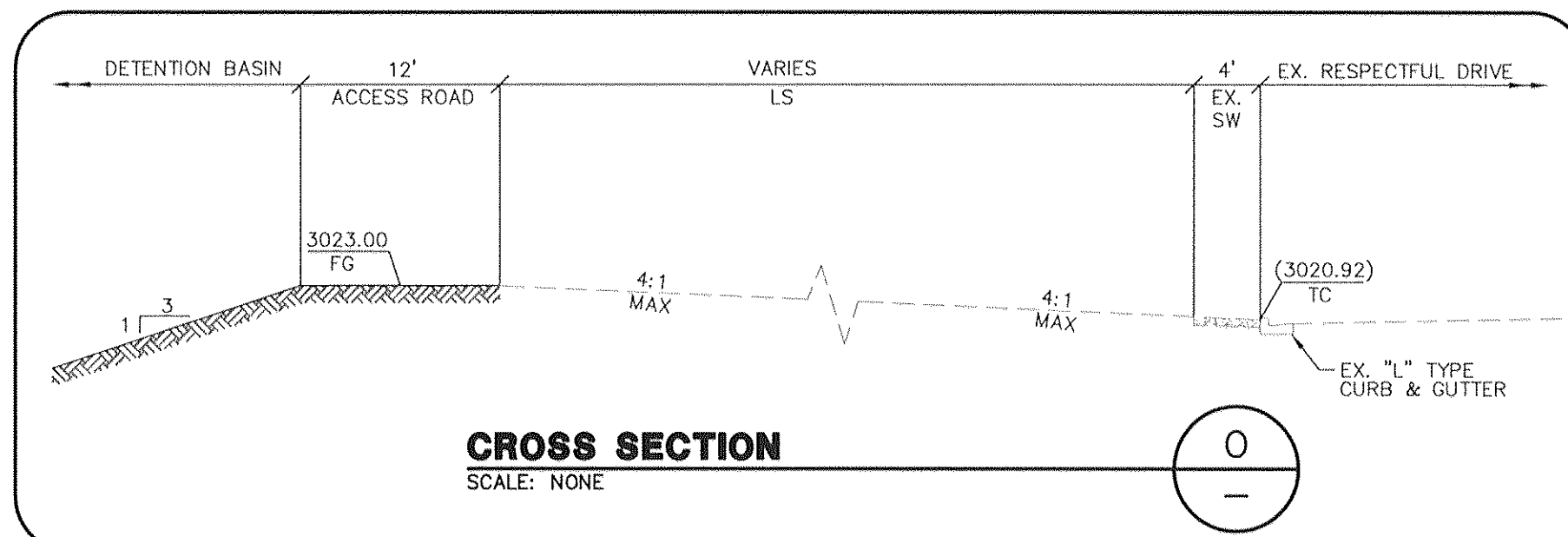
SUMMERLIN VILLAGE 26 - REVERENCE
OFFSITE DRAINAGE IMPROVEMENTS

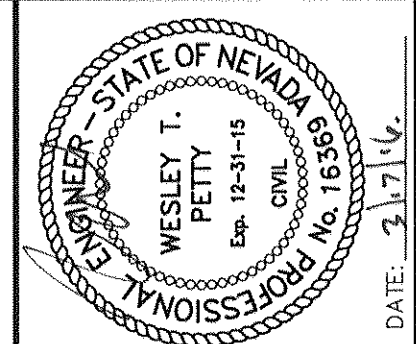
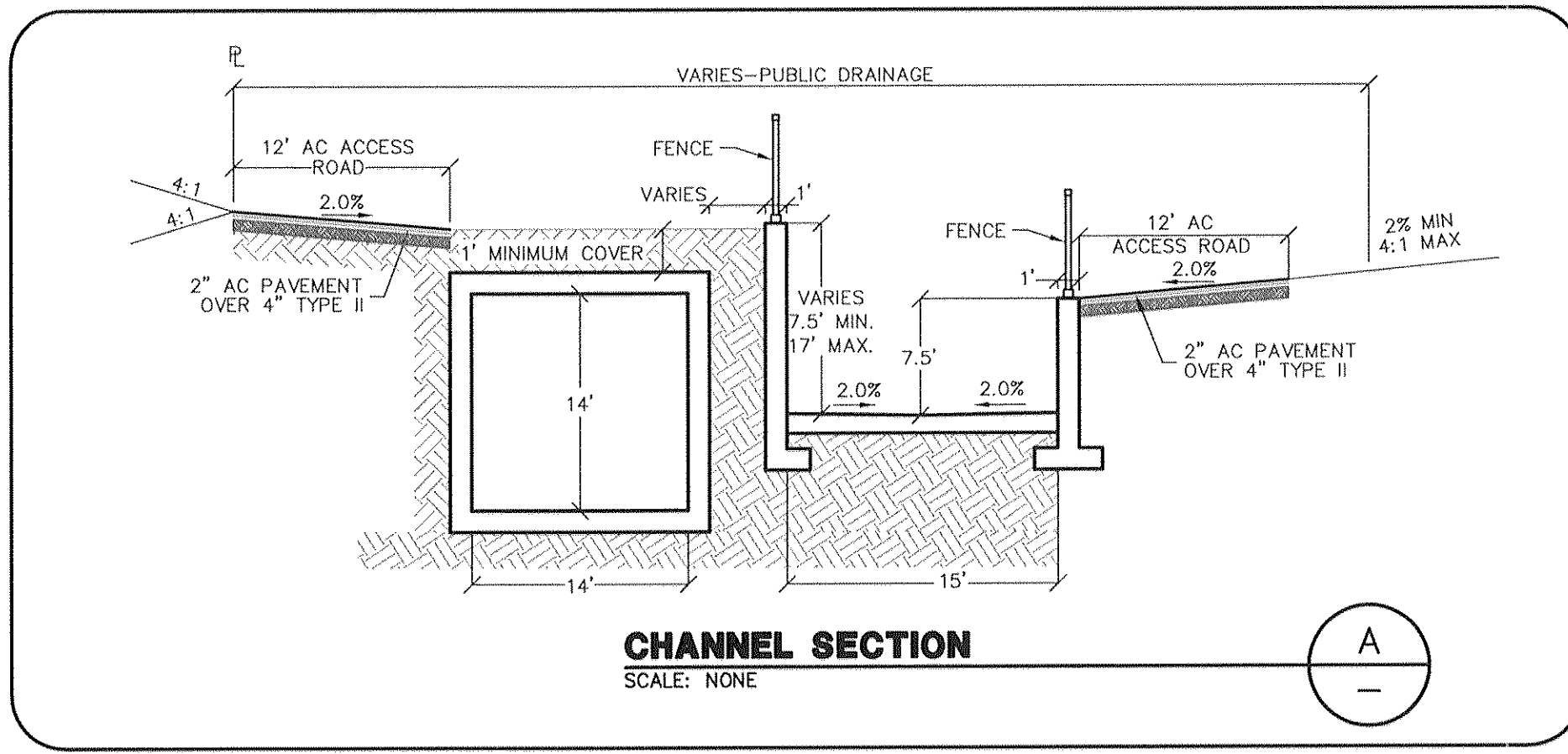
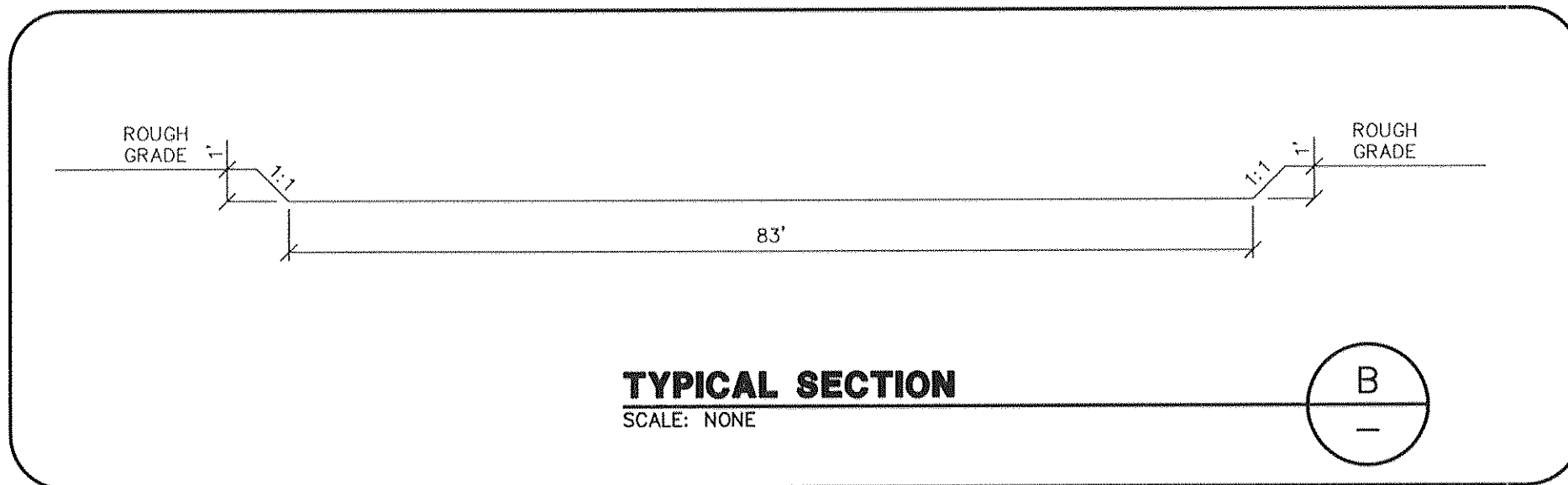
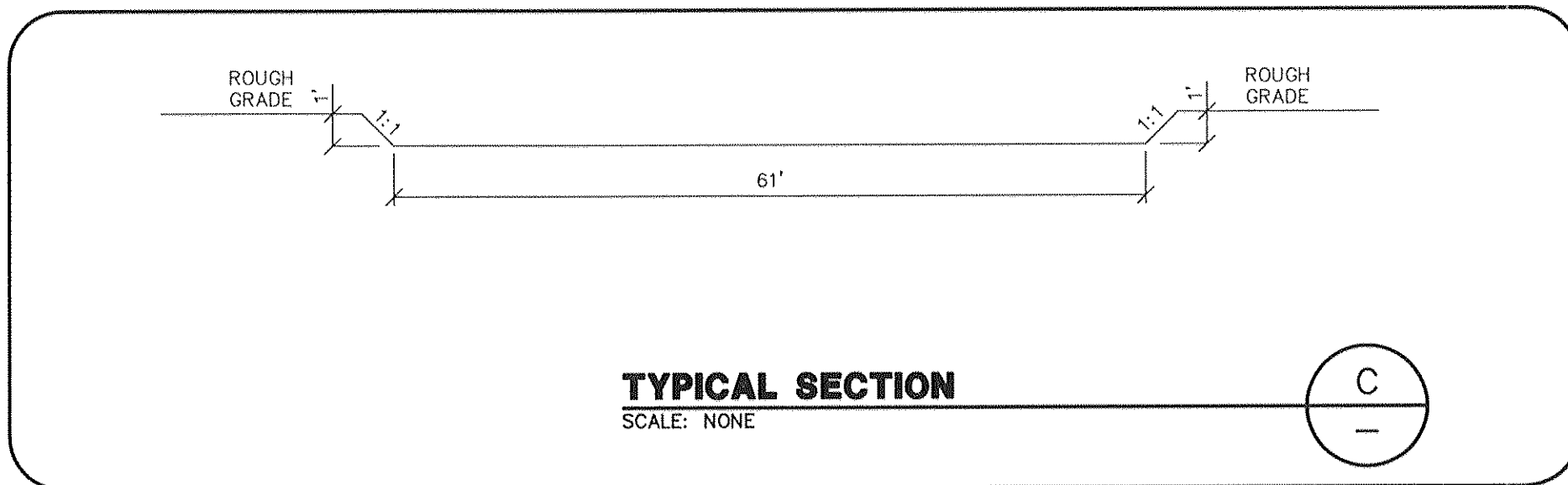
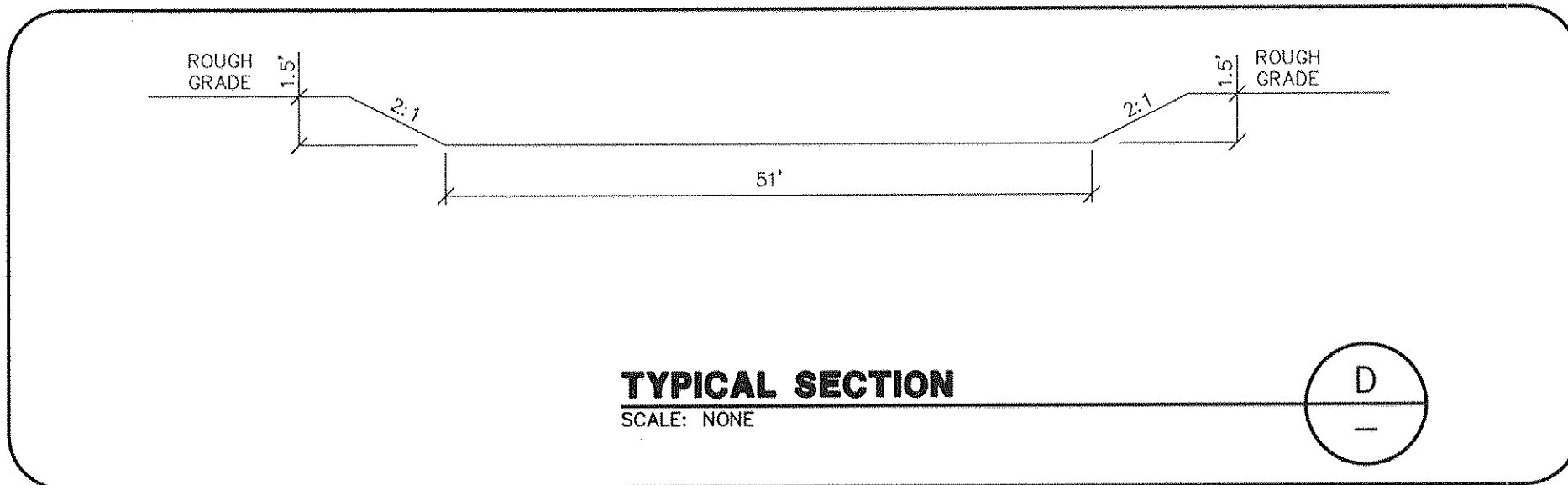
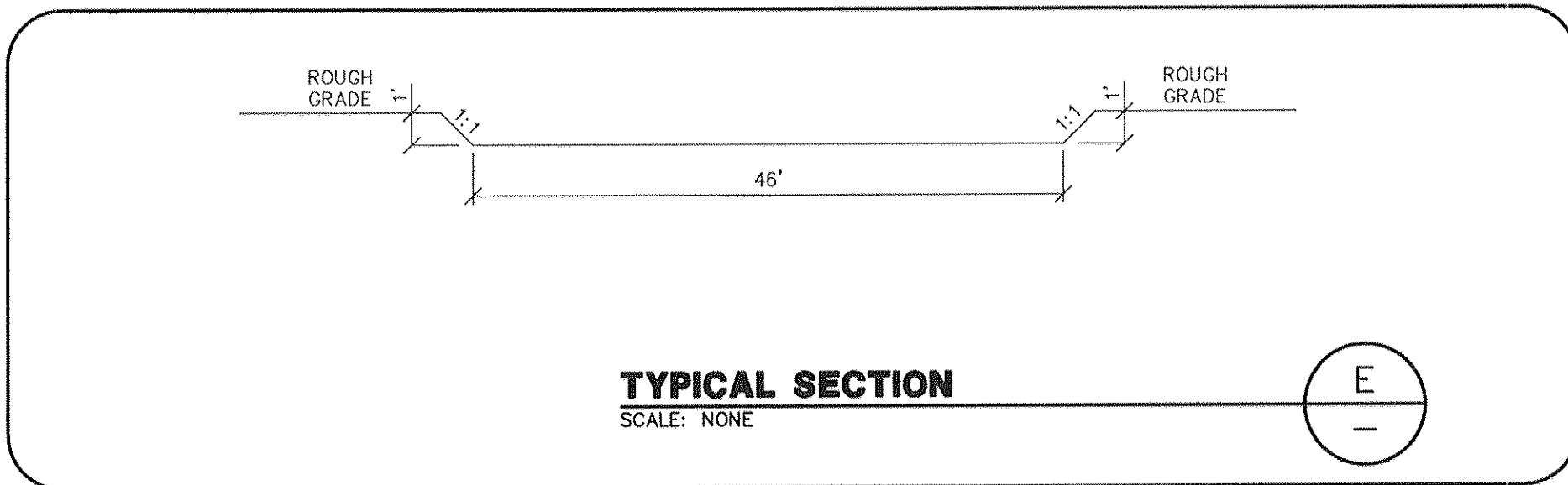
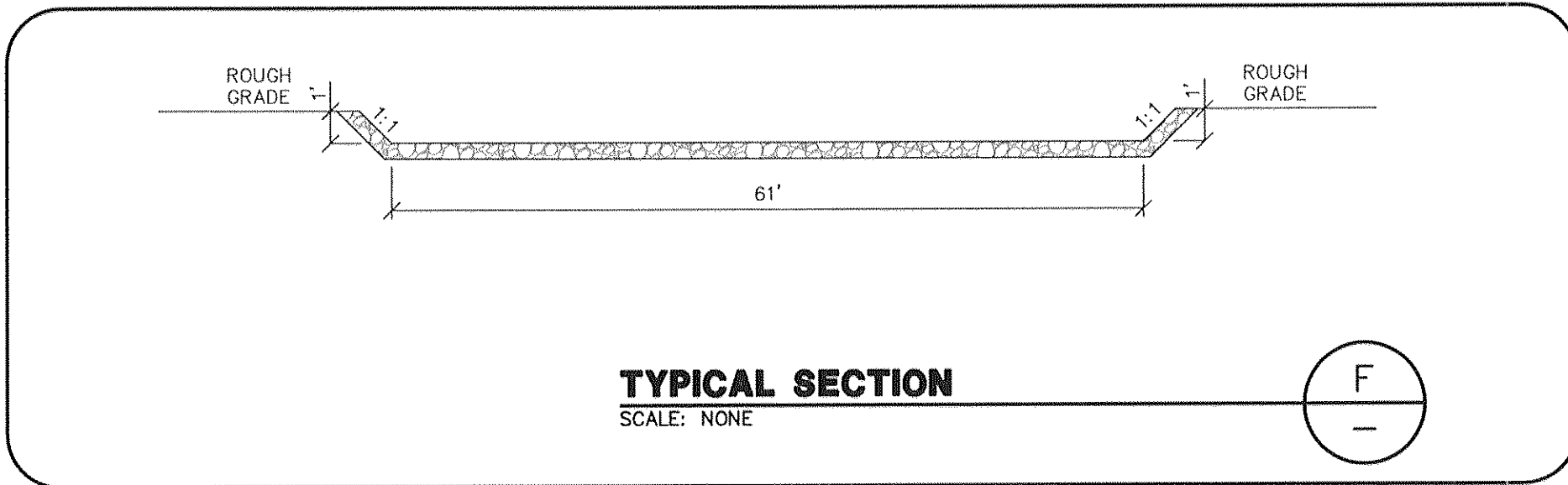
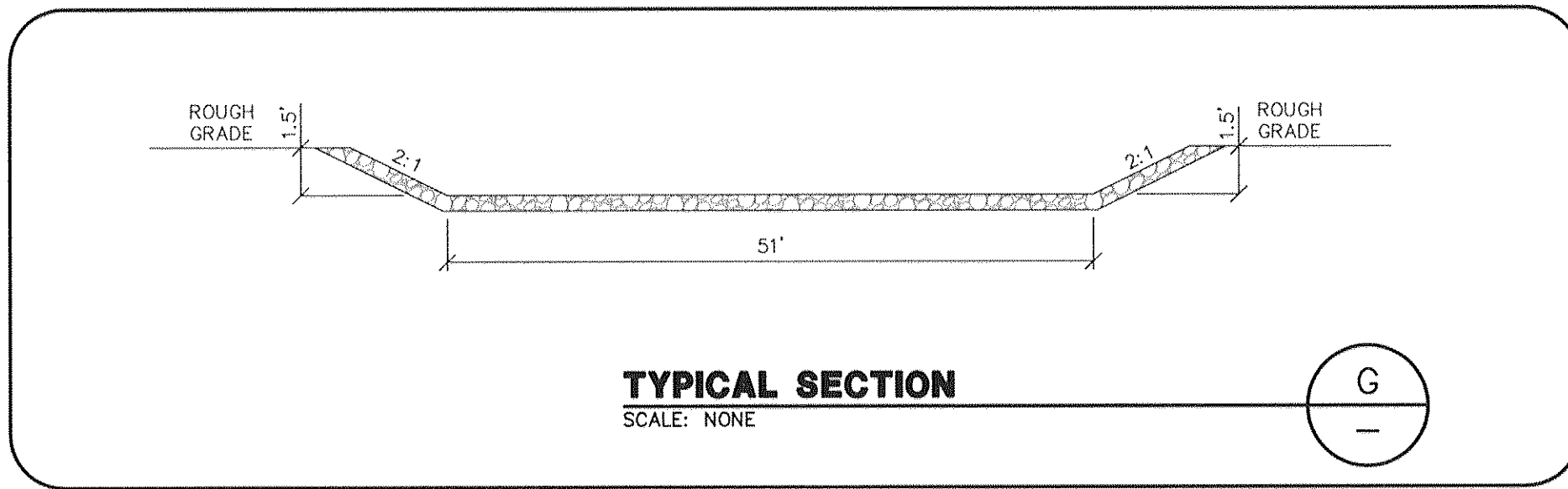
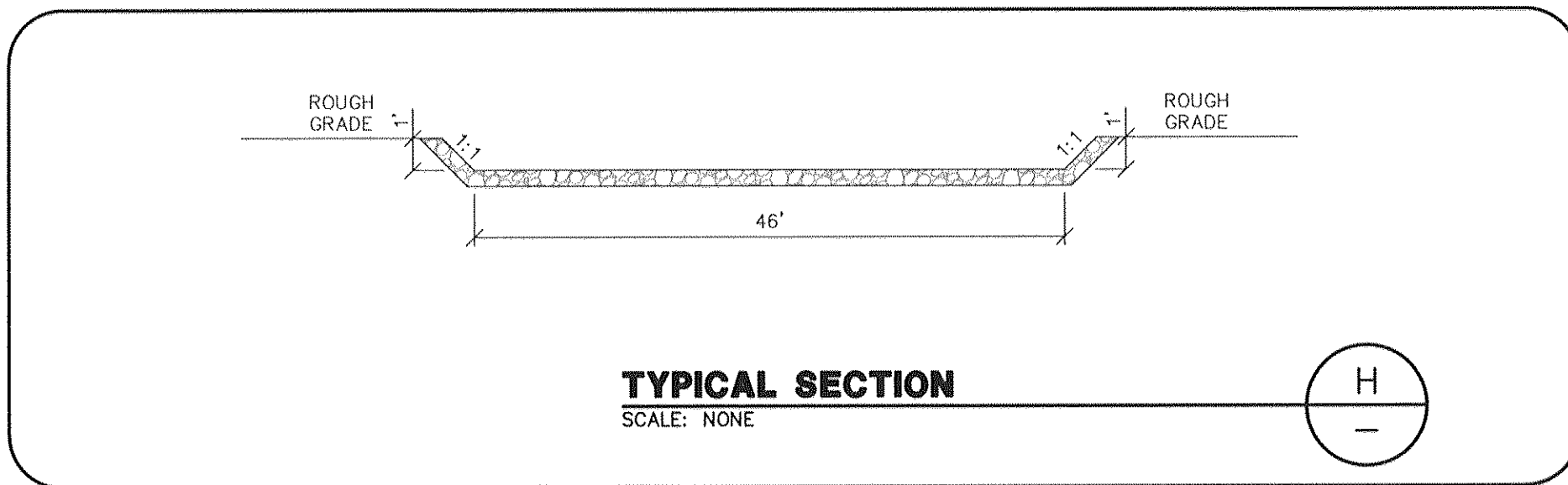
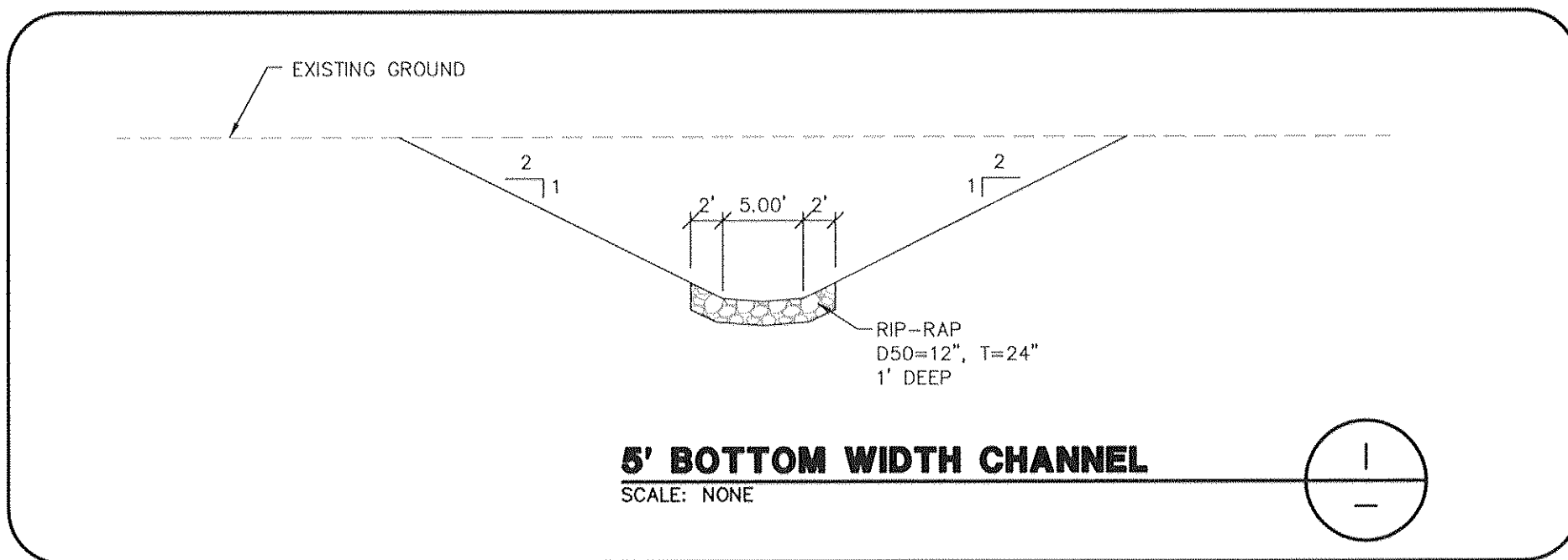
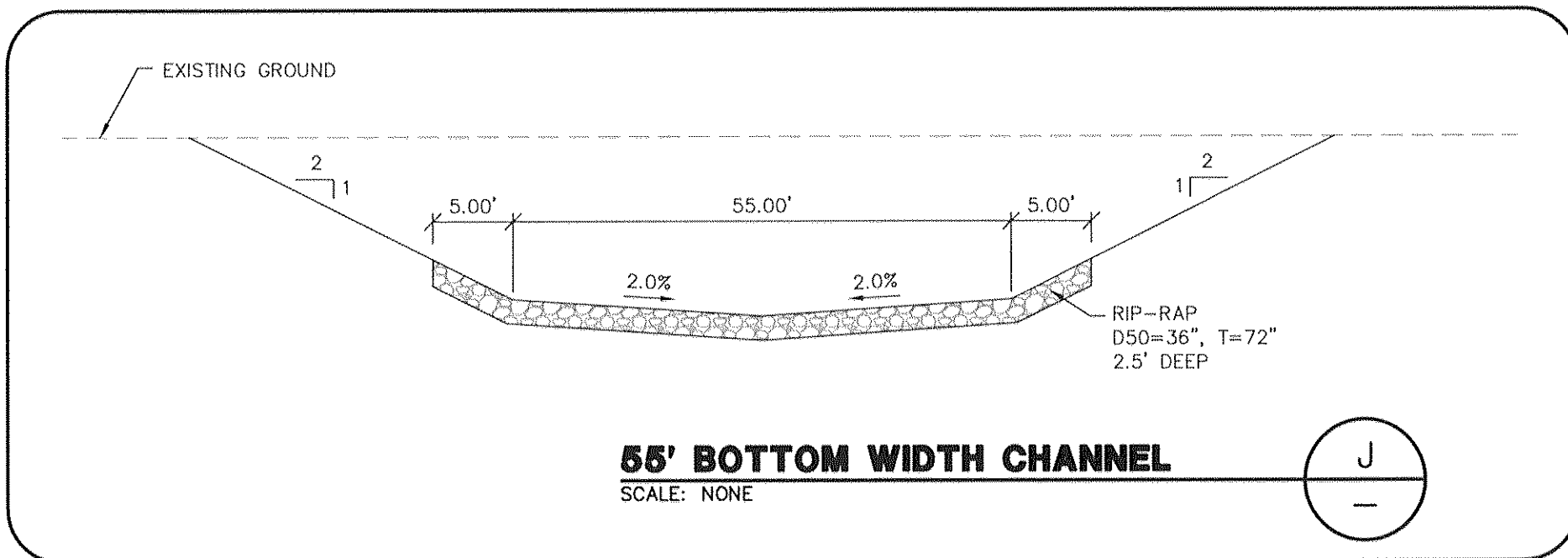
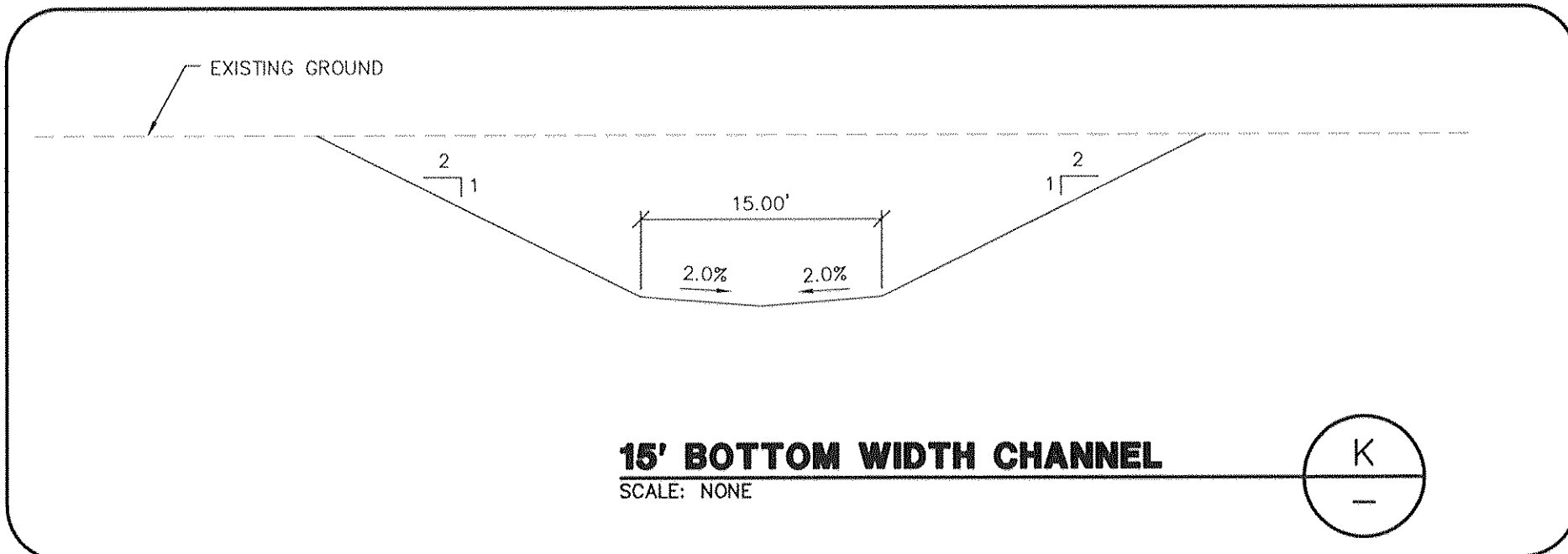
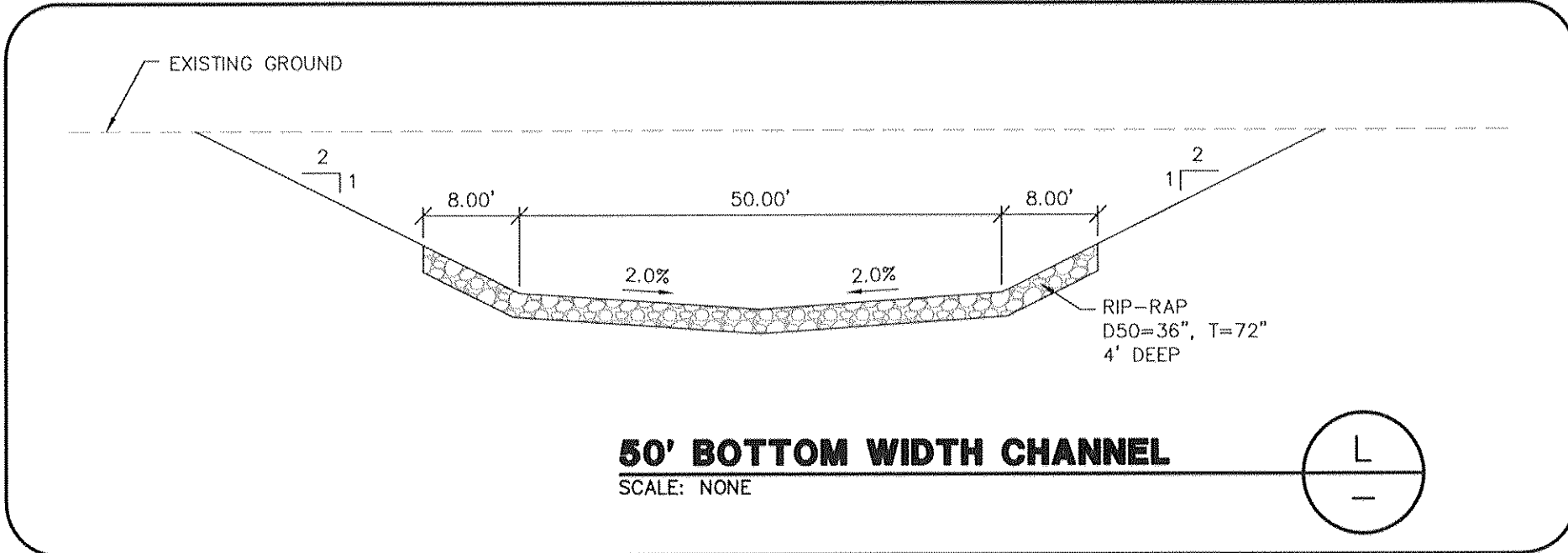
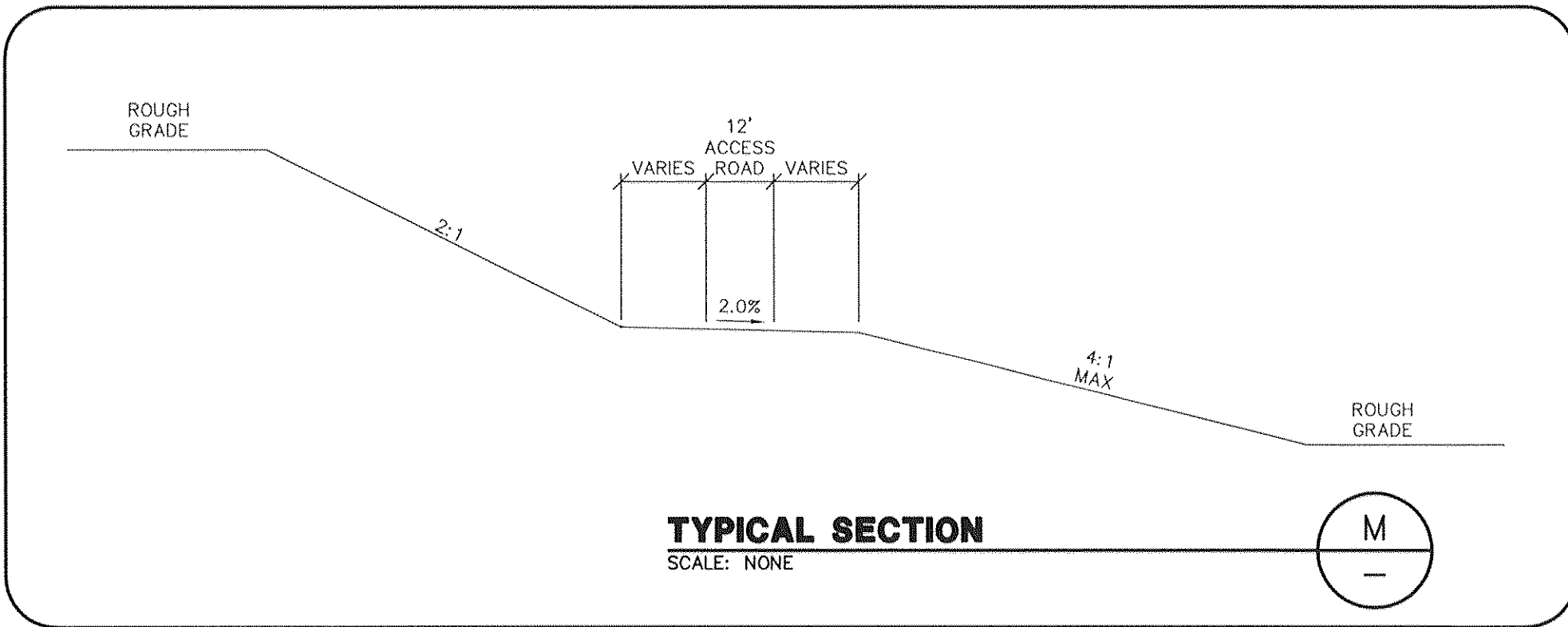
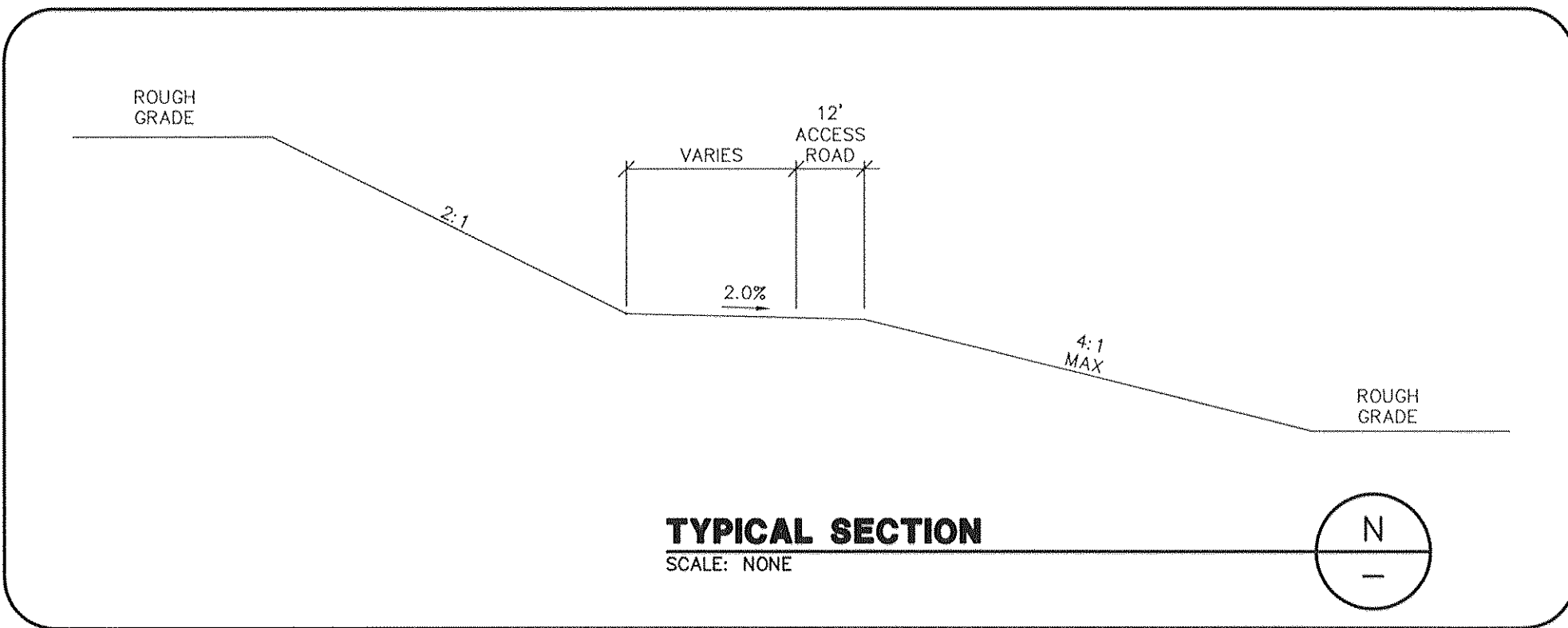
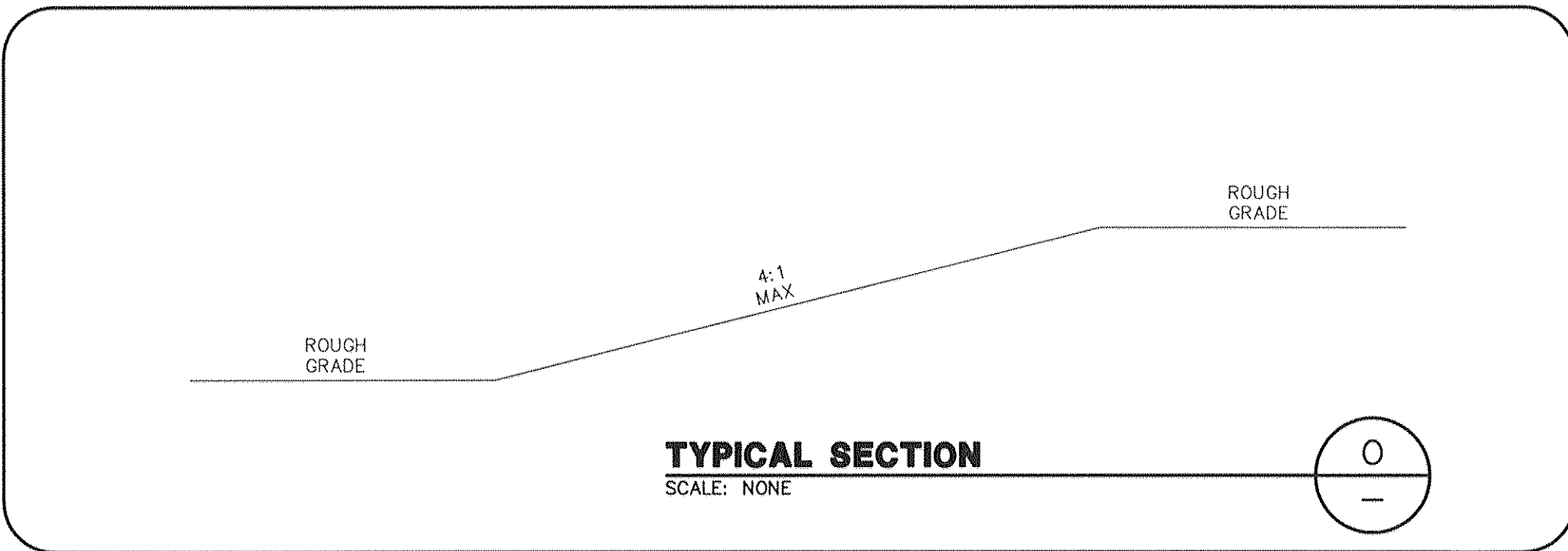
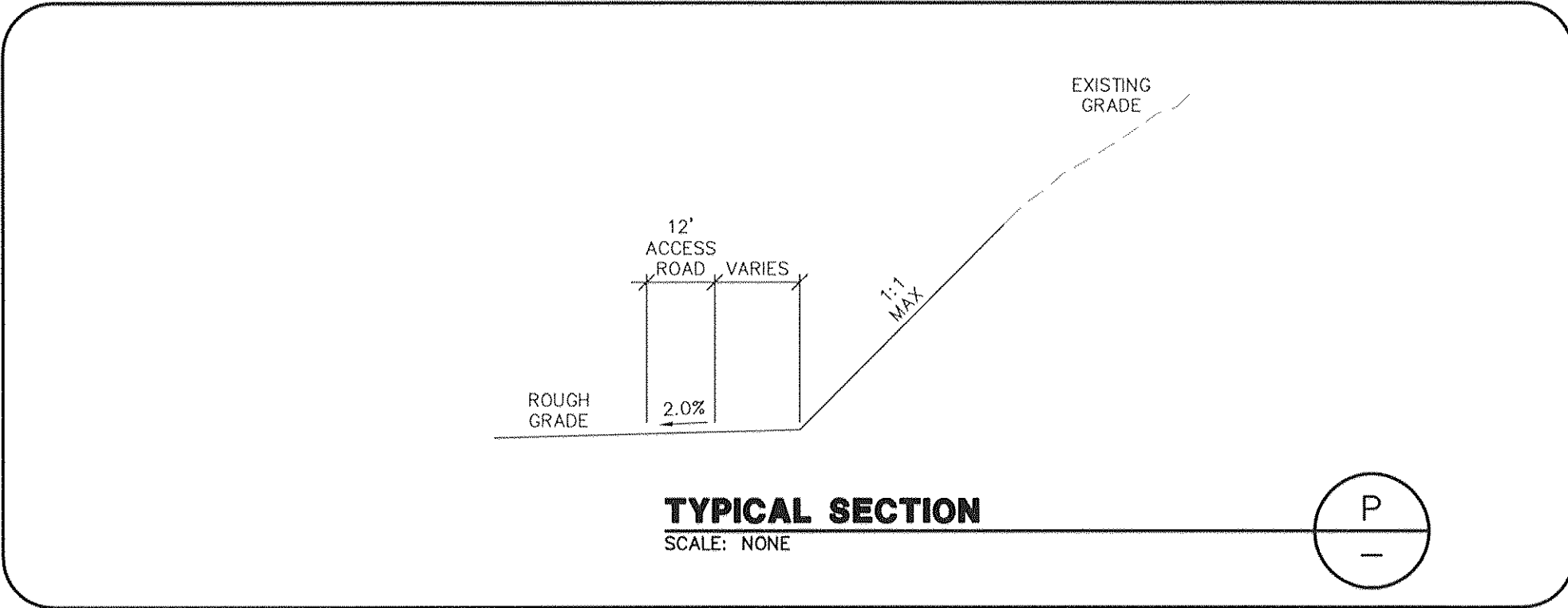
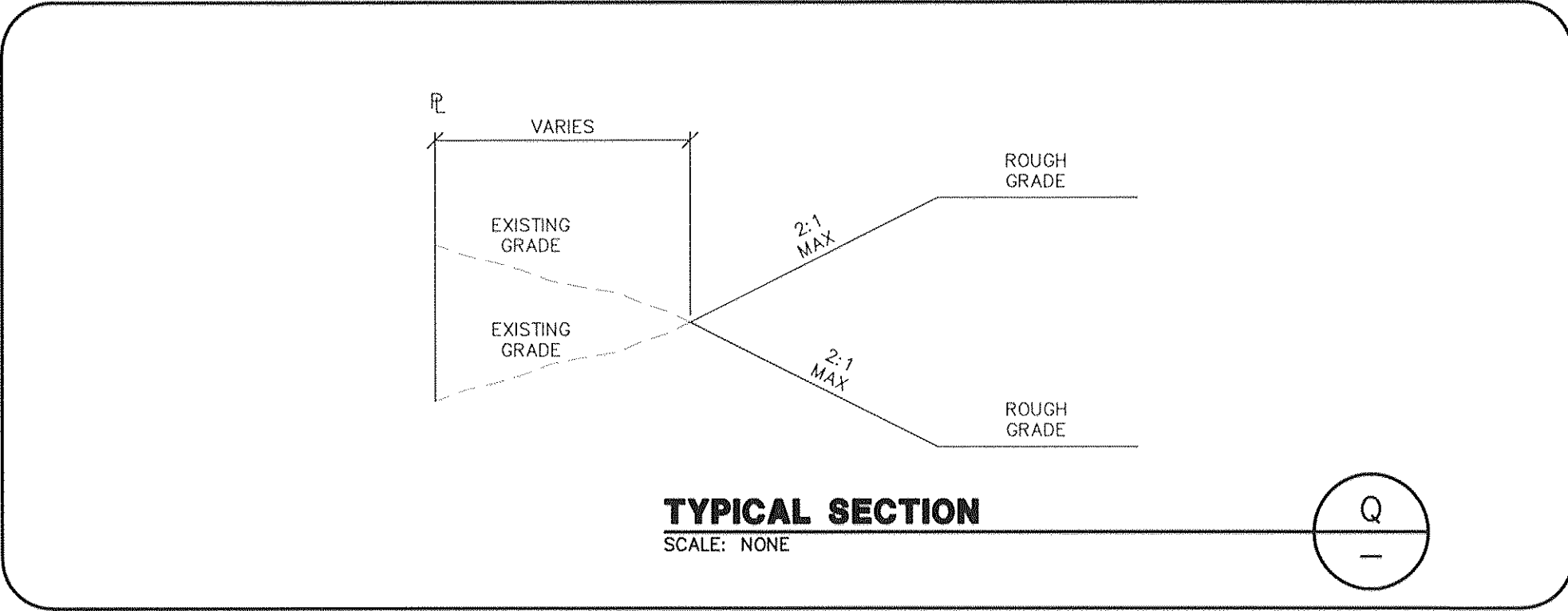
MASS GRADING PLAN XV

DRAWING
MG15

55 OF 87 SHITS







PROJECT NO.	DESIGN:	DRAWN:	CHECK:	PLOT DATE:	REV	DATE	DESCRIPTION
764-204-013	HN	NP	NP	03-17-16			

PROJECT NO.
764-204-013
DESIGN: HN
DRAWN: NP
CHECK: NP
PLOT DATE: 03-17-16
PLOT TIME: 14:07:11

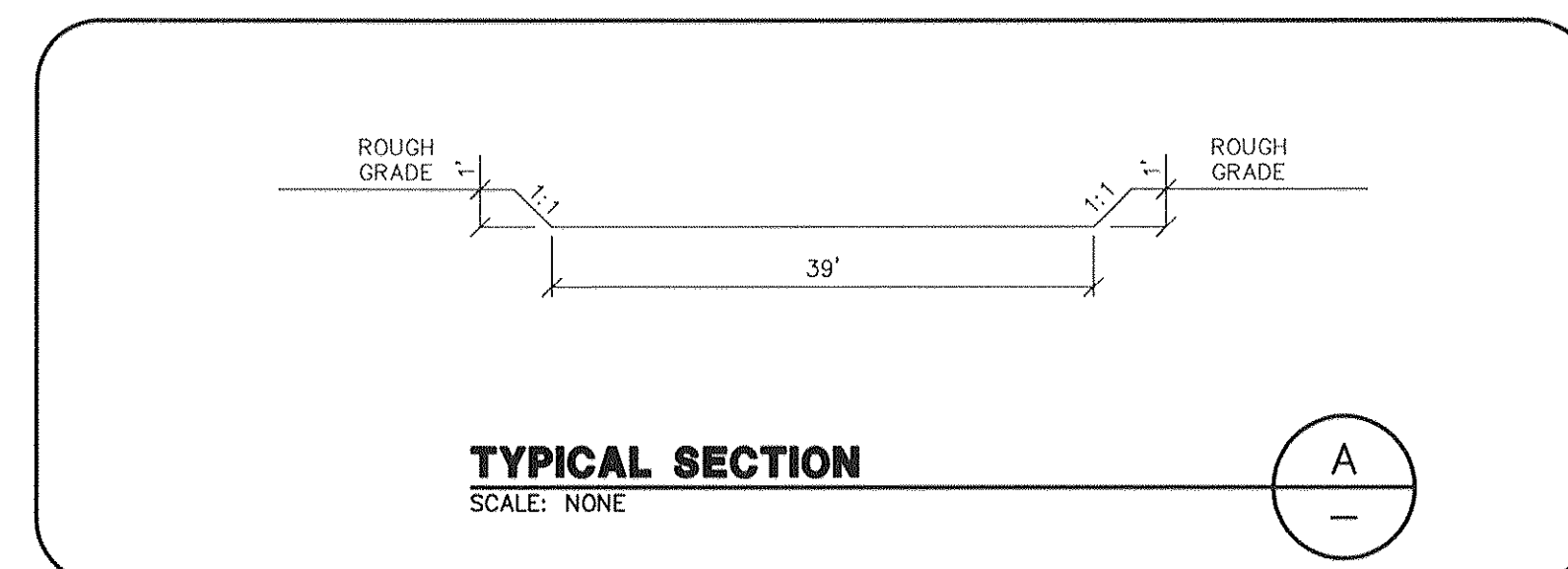
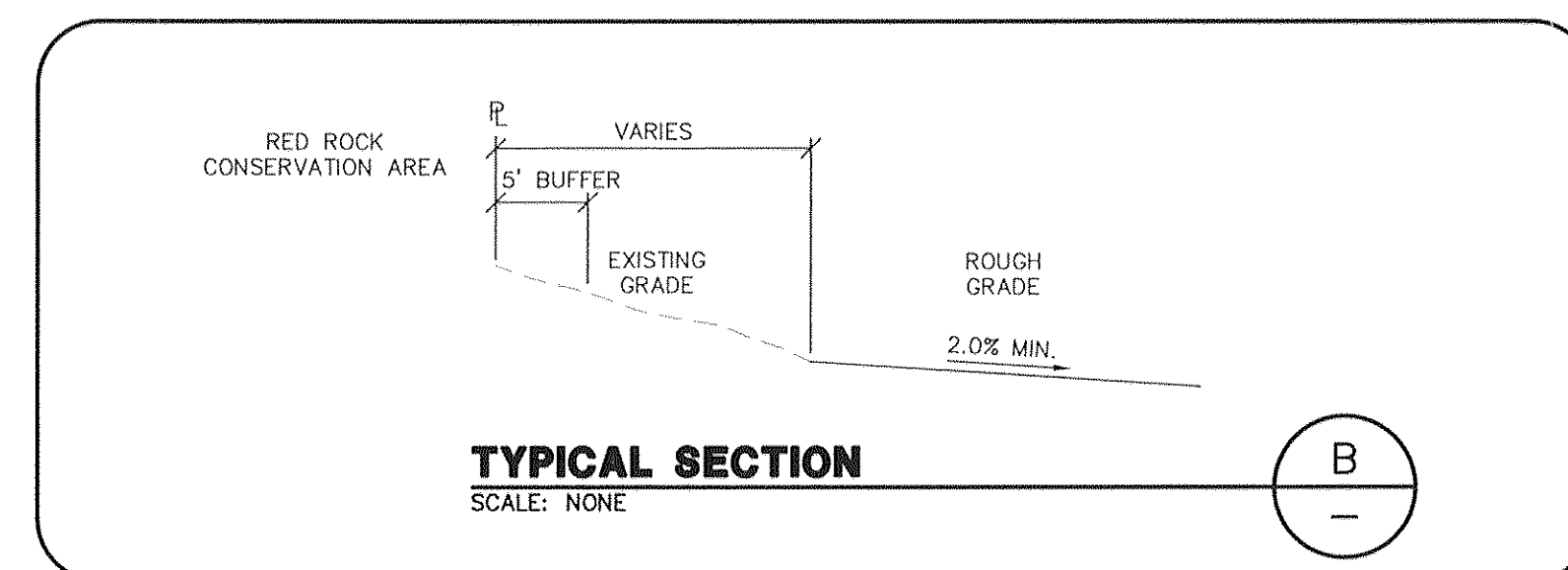
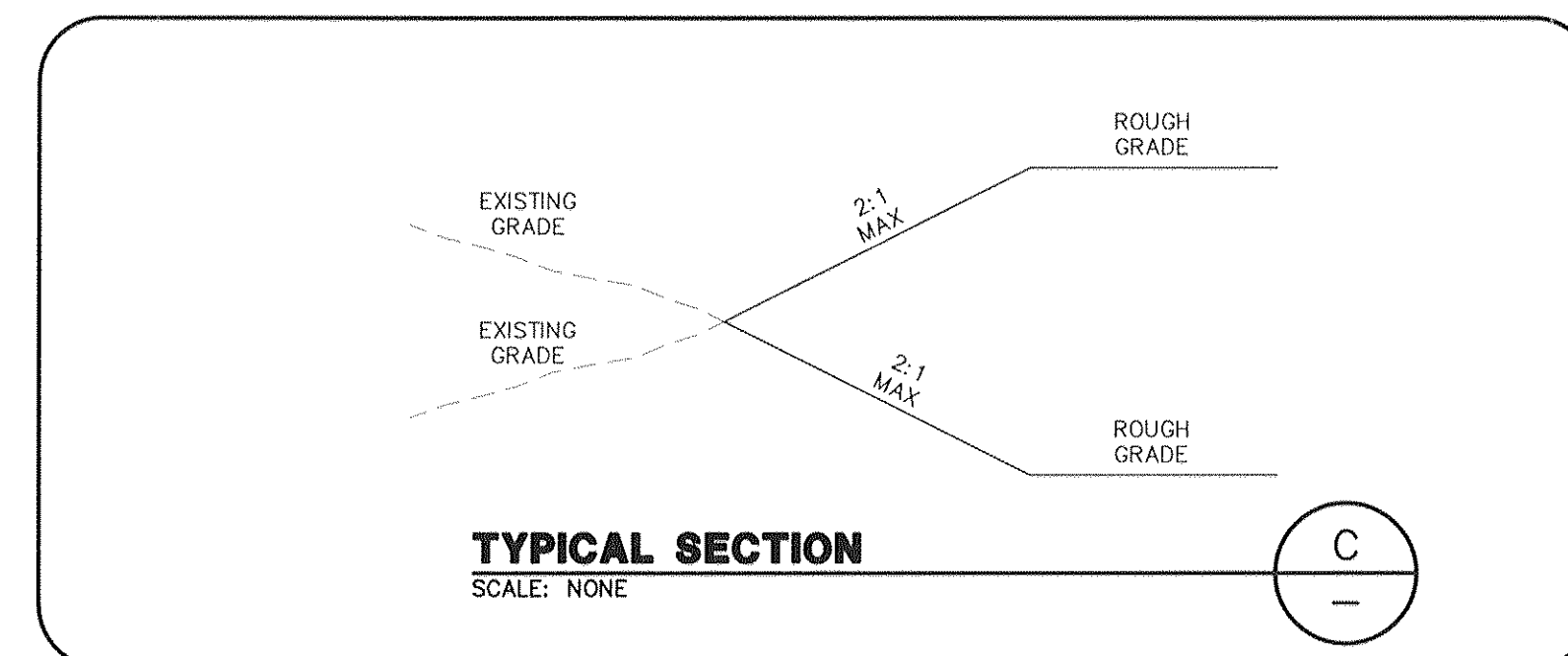
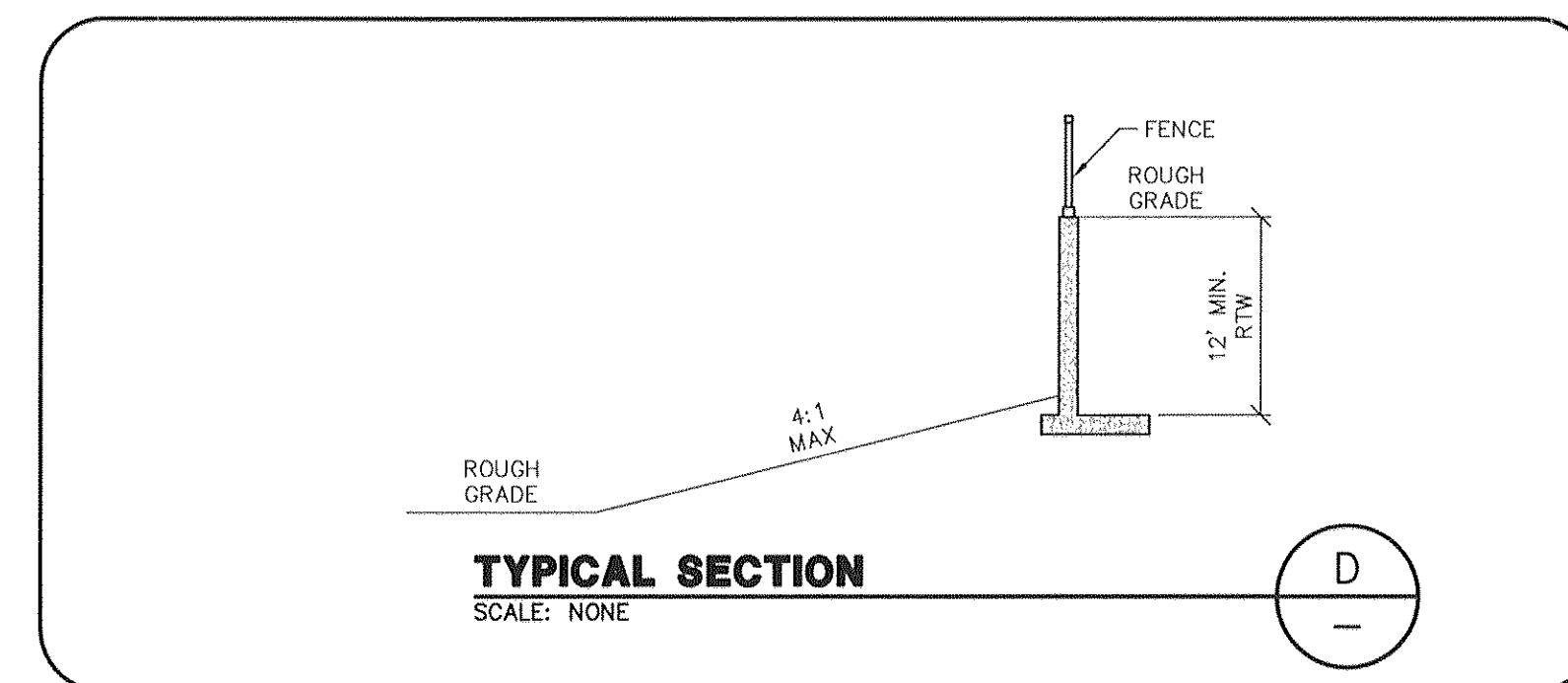
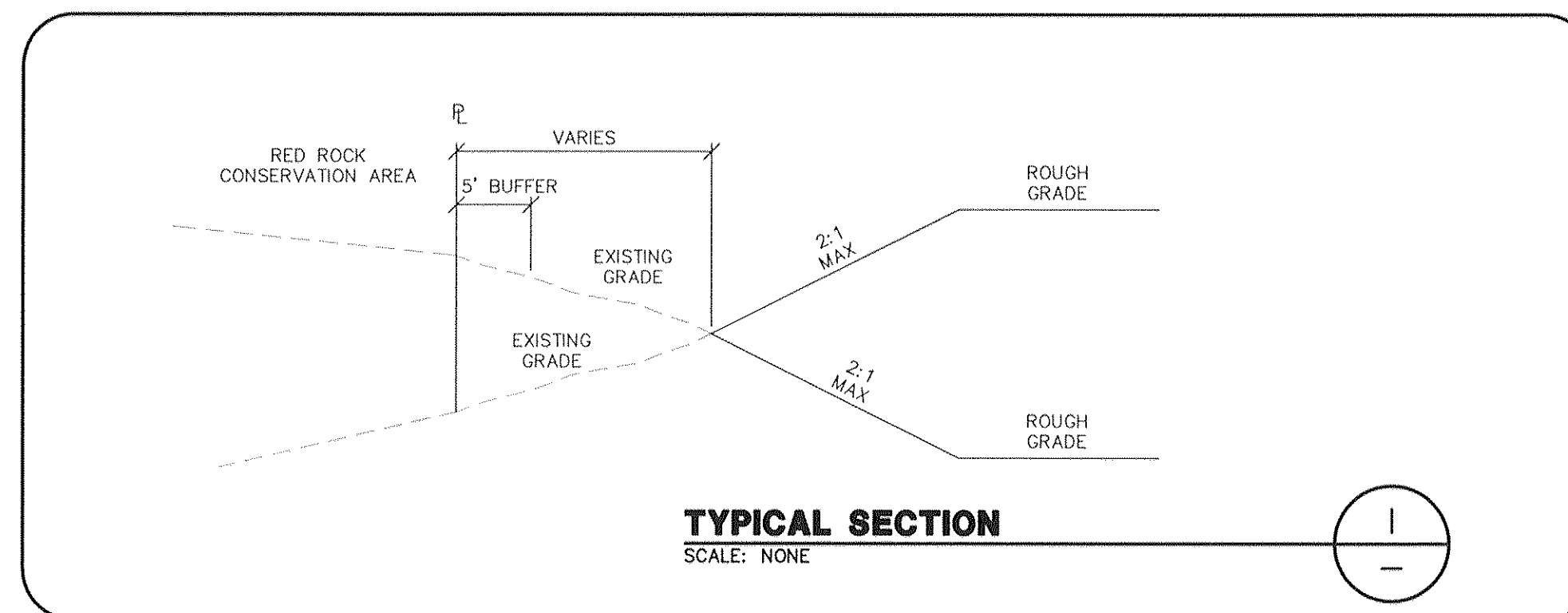
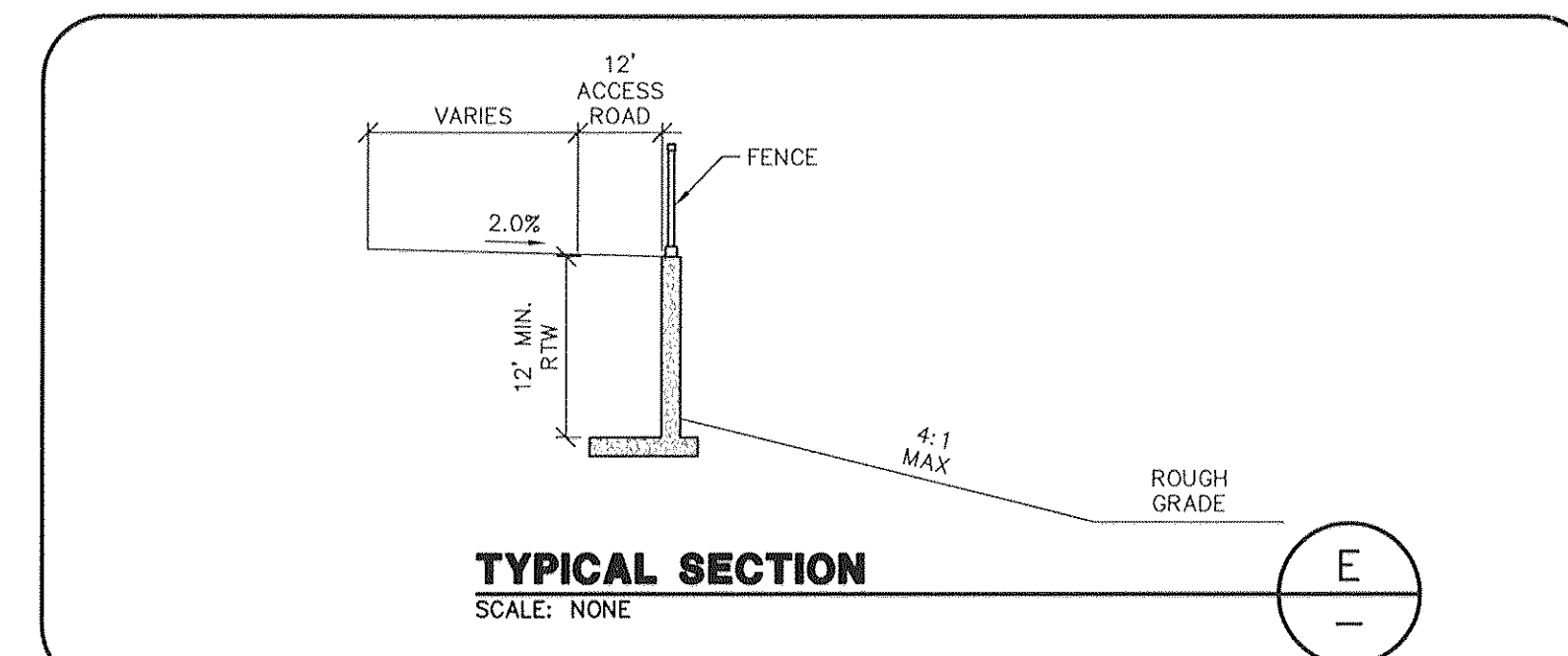
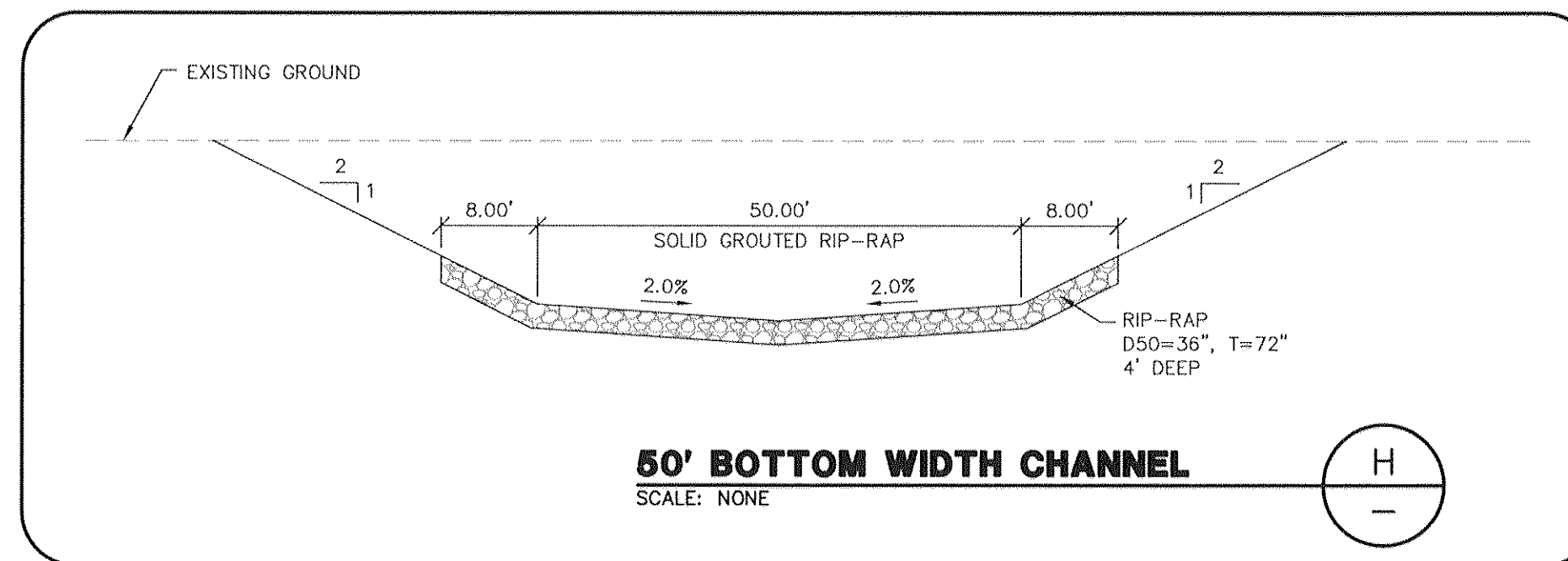
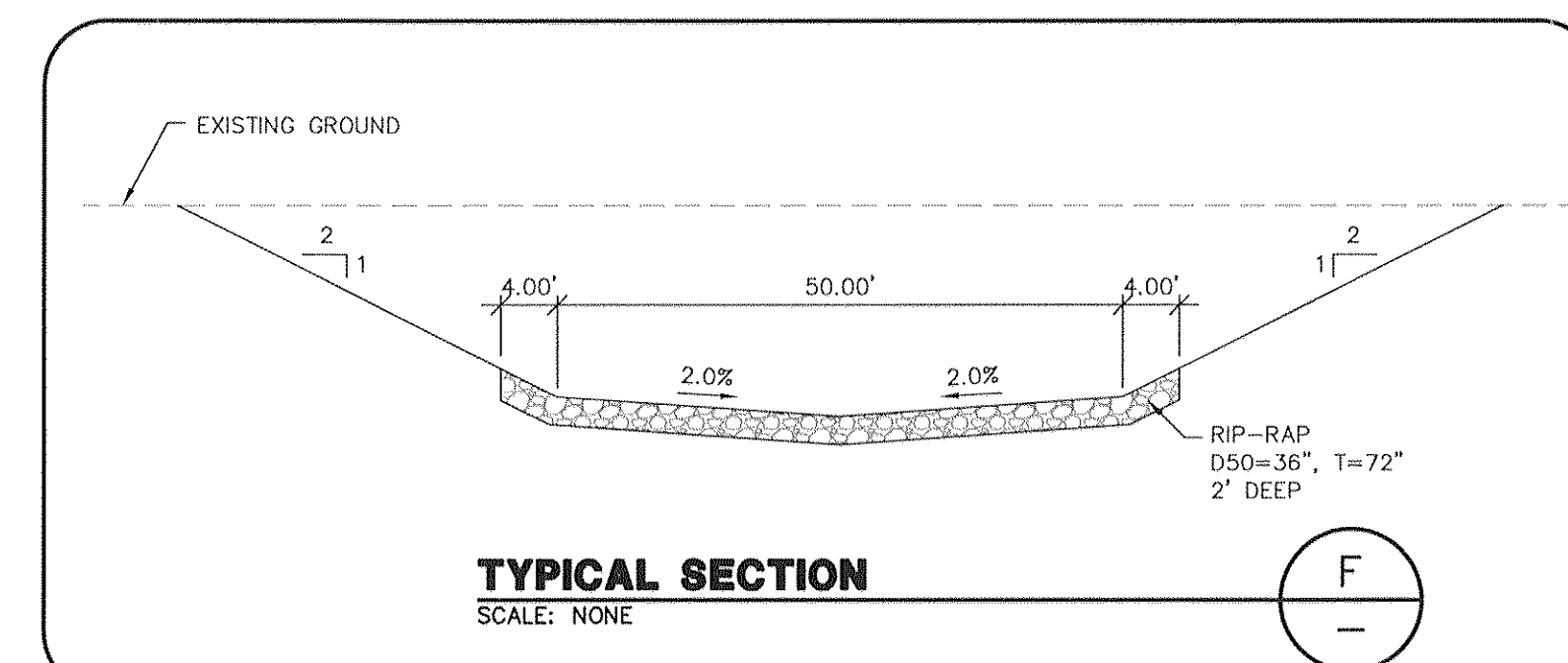
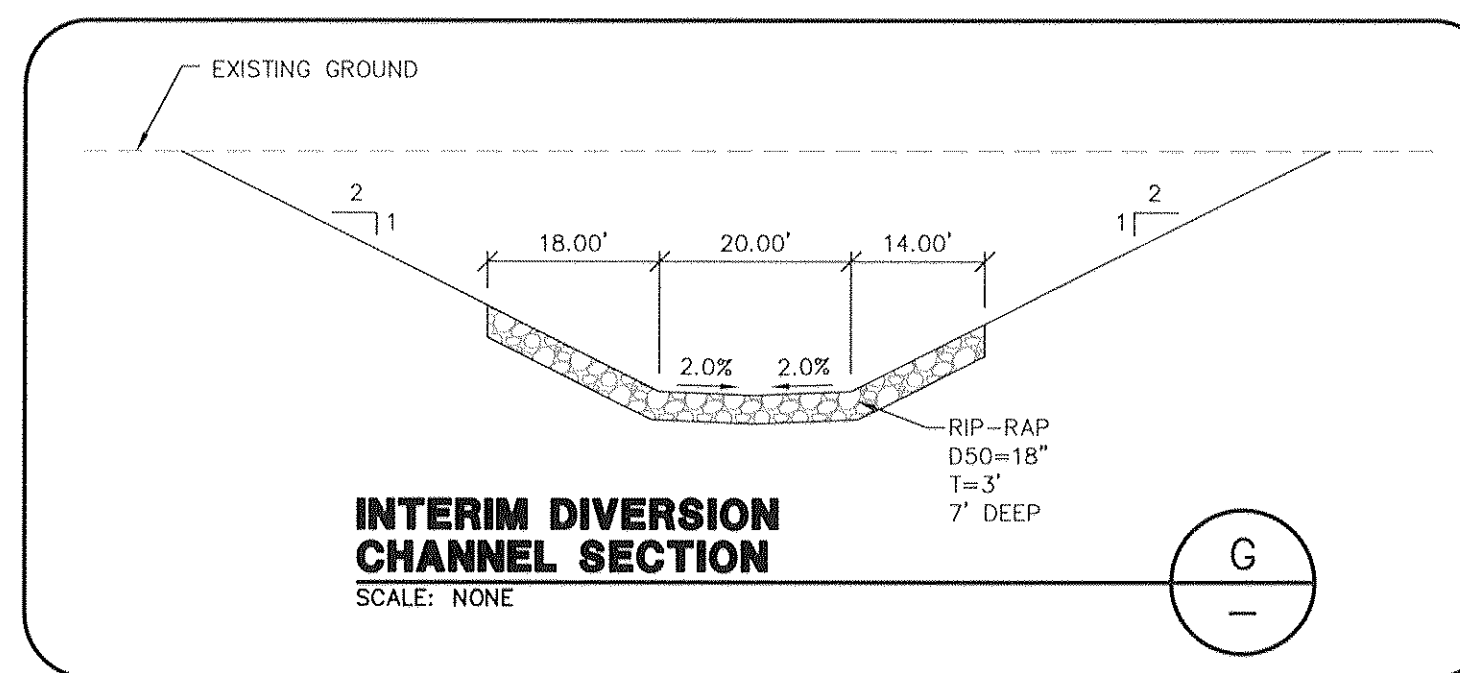
GCV' 1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcvengineering.com
ENGINEERS & SURVEYORS
F:\PROJECTS\700\764-204-013\DWG\PRODUCTION\05_DRAINAGE\013001.DWG
HAO NGUYEN

PULTE HOMES
SUMMERLIN VILLAGE 26 - REFERENCE
OFFSITE DRAINAGE IMPROVEMENTS
DETAIL SHEET IV

DRAWING
D4
63 OF 87 SHITS

H# --- CLV DWG# ---

% COMPLETE



DATE: 7/17/16

[illegible]

PROJECT NO.	HN
764-204-013	
DESIGN:	
DRAWN:	
CHECK:	WP
PLOT DATE: 03-17-16	
PLOT TIME: 14:07:08	

GCV
ENGINEERS[®], SURVIVORS

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gcvengineering.com

PROJECTS: 700+ / 764-204-013 DWG PRODUCTION / 05 DRAINAGE / 013307.DWG
HAO NGUYEN

PULTE HOMES

SUMMERLIN VILLAGE 26 - REVERENCE
OFFSITE DRAINAGE IMPROVEMENTS

DETAIL SHEET V

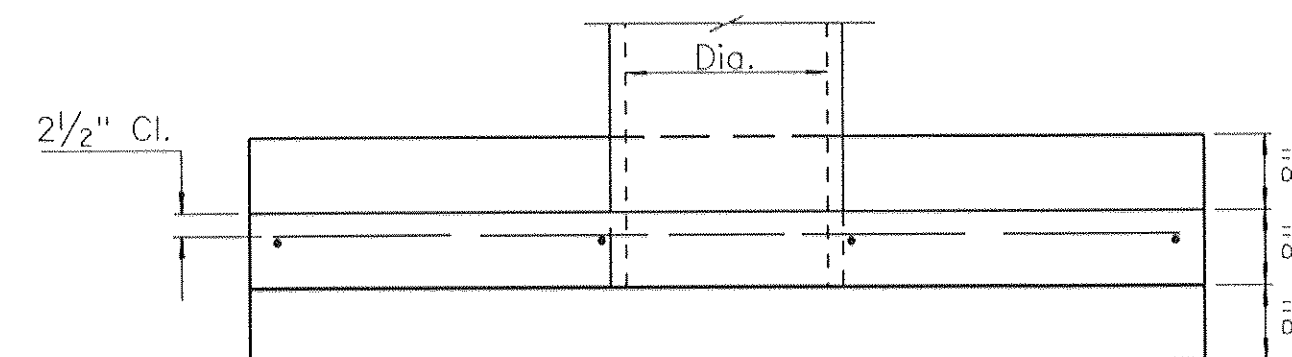
DRAWING
D5

64 OF 87 SHTS

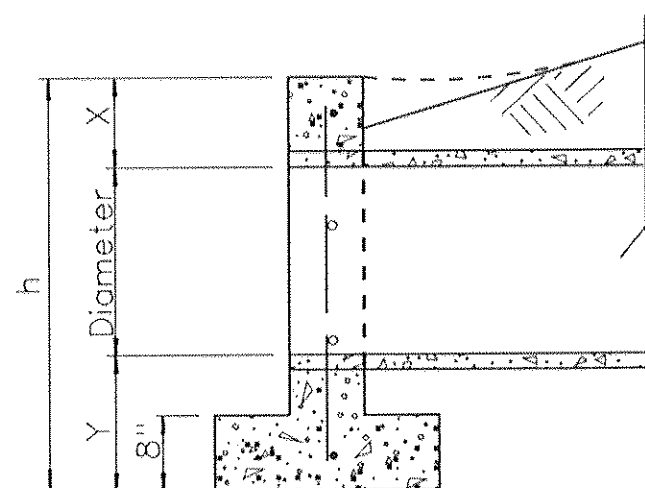
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CLV DWG#

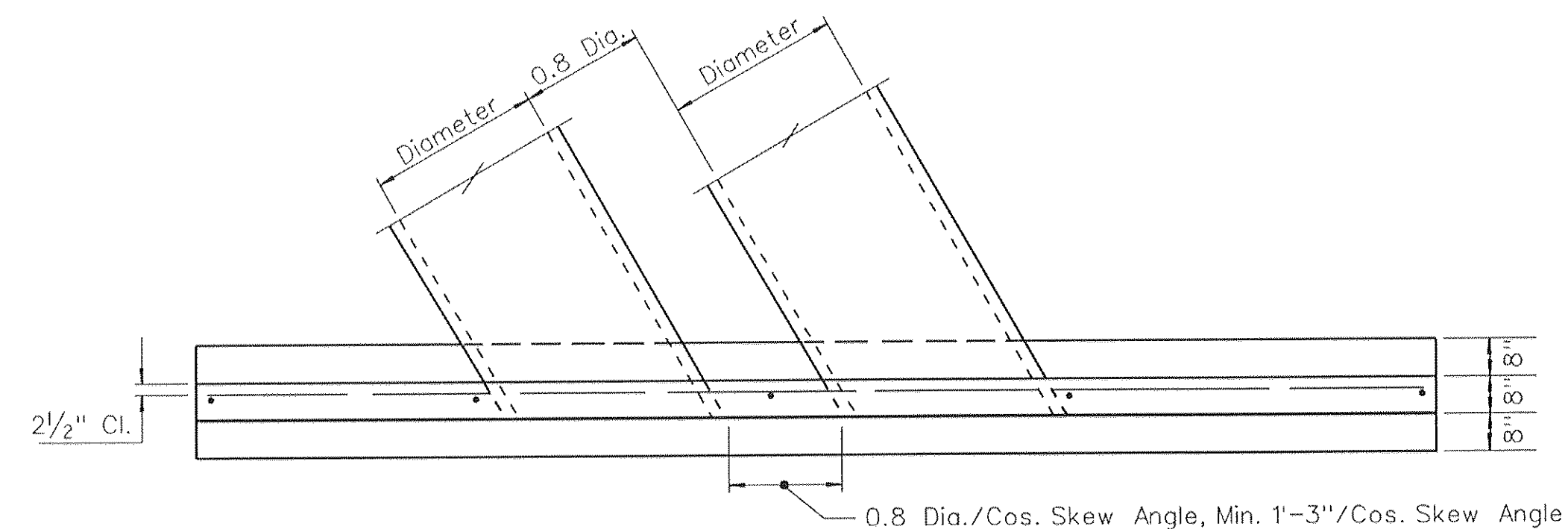
DATE	% COMPLETE
7/17/6	



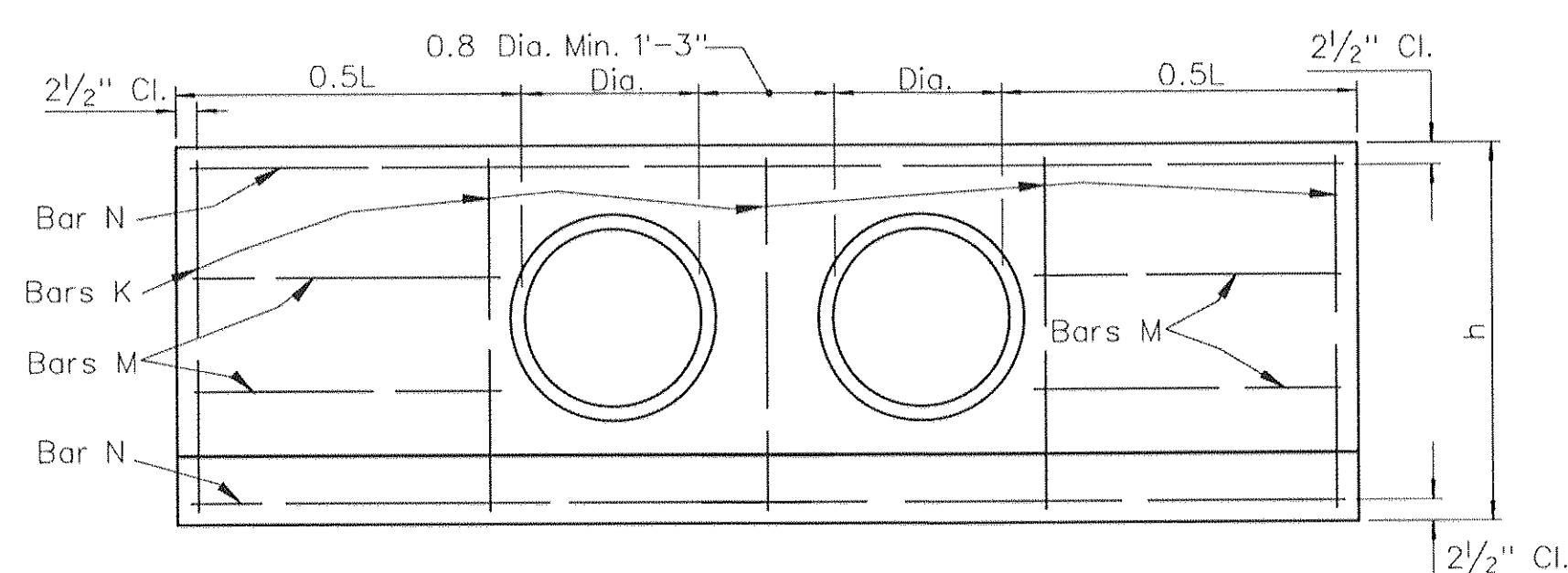
PLAN
SINGLE RCP/HDPE



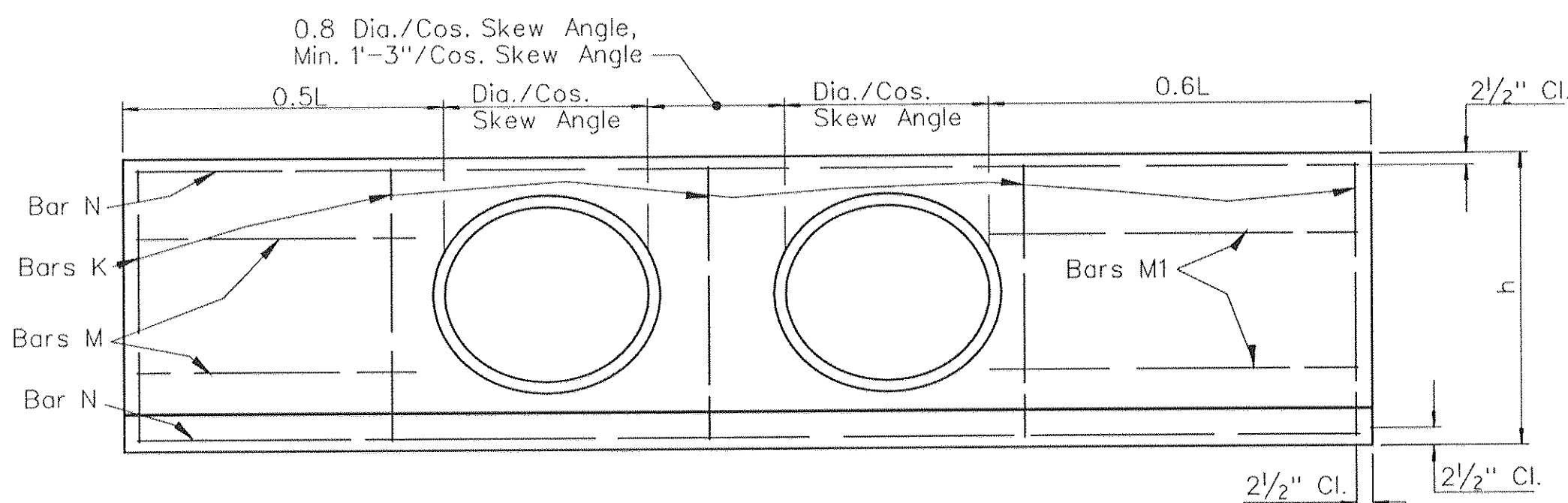
SECTION
FOR ALL HEADWALLS



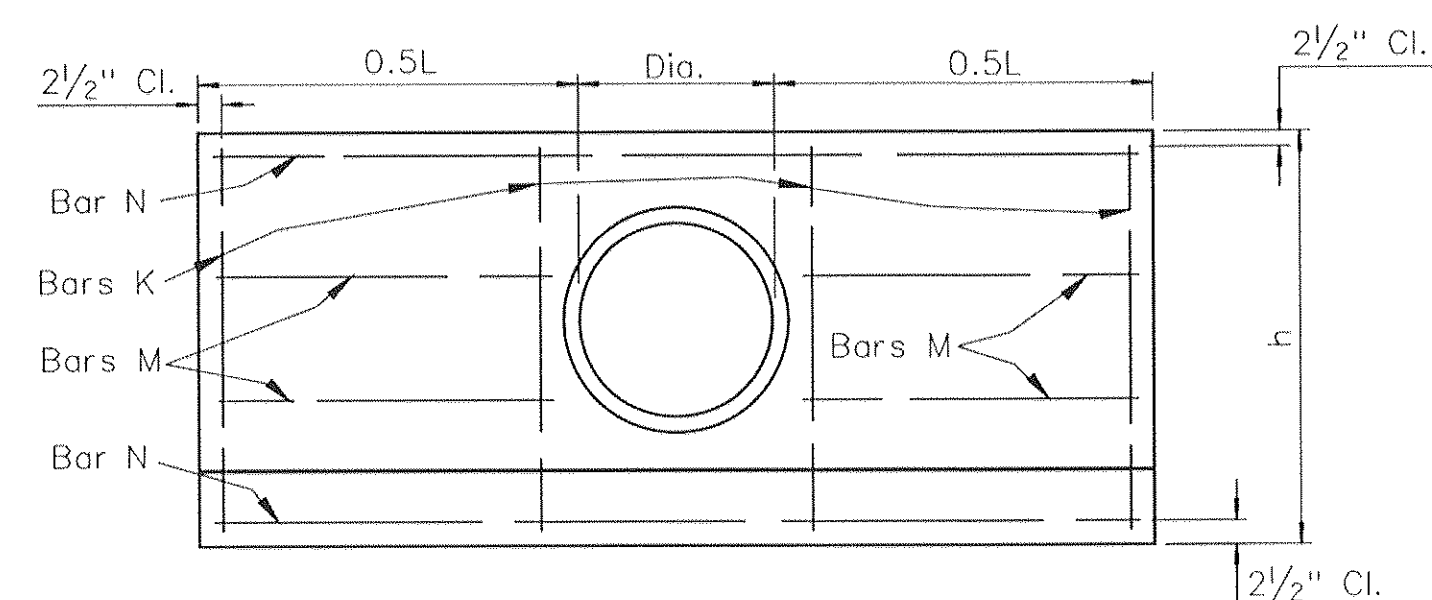
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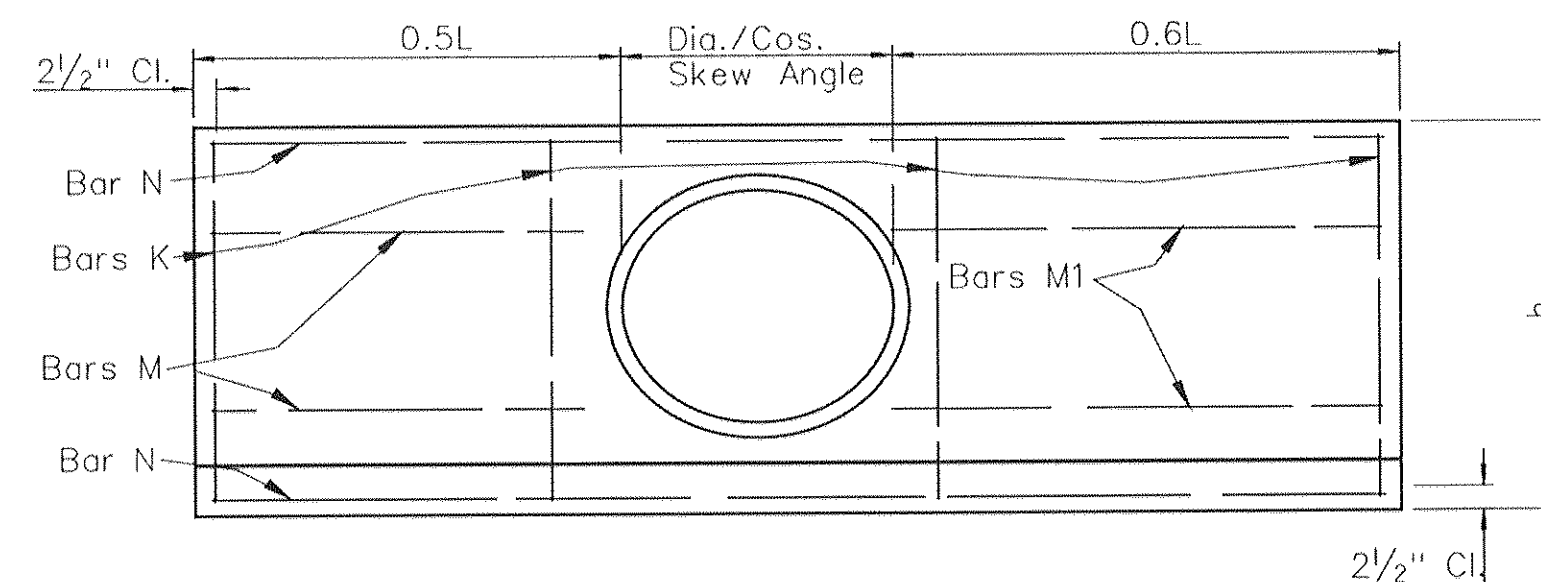
ELEVATION
DOUBLE RCP/HDPE



ELEVATION
DOUBLE RCP/HDPE



ELEVATION
SINGLE RCP/HDPE
0° SKEW



ELEVATION
SINGLE RCP/HDPE
15° TO 45° SKEW

SHEET 1 OF 2

NEVADA DEPARTMENT OF TRANSPORTATION

CULVERT HEADWALLS
12" TO 36" RCP/HDPE

Signed Original On File	R-2.5.1 (502)	
CHIEF HYDRAULICS ENGINEER	ADOPTED 8/69	REVISION 5/09

R-26

QUANTITIES SHOWN BELOW ARE FOR TWO HEADWALLS.

RCP/ HDPE SIZE DIA.	RCP/ HDPE AREA SQ. FT.	SINGLE RCP/HDPE										DOUBLE RCP/HDPE										X	Y	L	h				
		0° SKEW		15° SKEW		30° SKEW		45° SKEW		CONC CU YD	STEEL LB	0° SKEW		15° SKEW		30° SKEW		45° SKEW		CONC CU YD	STEEL LB								
		CONC CU YD	STEEL LB	CONC CU YD	STEEL LB	CONC CU YD	STEEL LB	CONC CU YD	STEEL LB			CONC CU YD	STEEL LB	CONC CU YD	STEEL LB	CONC CU YD	STEEL LB	CONC CU YD	STEEL LB										
12"	0.79	1.00	46	1.09	49	1.10	49	1.14	50	1.41	59	1.52	62	1.58	64	1.73	67	10"	1'- 2"	4'	3'	10"	1'- 2"	4'	3'				
15"	1.23	1.32	55	1.45	58	1.47	59	1.52	60	1.80	70	1.93	73	2.01	75	2.18	79	10 1/4"	1'- 2 1/4"	5'	3'- 3 1/2"	10 1/4"	1'- 2 1/4"	5'	3'- 3 1/2"				
18"	1.77	1.62	69	1.77	73	1.80	74	1.85	75	2.15	85	2.31	89	2.40	91	2.60	96	10 1/2"	1'- 2 1/2"	5'- 9"	3'- 7"	10 1/2"	1'- 2 1/2"	5'- 9"	3'- 7"				
21"	2.41	1.95	77	2.13	82	2.16	83	2.23	85	2.59	95	2.79	101	2.90	103	3.13	108	10 3/4"	1'- 2 3/4"	6'- 6"	3'- 10 1/2"	10 3/4"	1'- 2 3/4"	6'- 6"	3'- 10 1/2"				
24"	3.14	2.27	96	2.48	102	2.52	103	2.60	105	3.01	116	3.24	122	3.37	125	3.64	131	11"	1'- 3"	7'- 3"	4'- 2"	11"	1'- 3"	7'- 3"	4'- 2"				
27"	3.98	2.62	105	2.86	111	2.90	112	2.99	114	3.48	128	3.75	134	3.89	137	4.21	144	11 1/2"	1'- 3 1/2"	8'	4'- 5"	11 1/2"	1'- 3 1/2"	8'	4'- 5"				
30"	4.91	3.08	117	3.37	123	3.41	124	3.44	127	4.07	141	4.38	148	4.55	152	4.90	159	11 1/2"	1'- 3 1/2"	9'	4'- 9"	11 1/2"	1'- 3 1/2"	9'	4'- 9"				
33"	5.94	3.50	125	3.82	132	3.87	134	3.98	137	4.62	153	4.98	160	5.17	164	5.56	172	11 3/4"	1'- 3 3/4"	9'- 9"	5'- 1 1/2"	11 3/4"	1'- 3 3/4"	9'- 9"	5'- 1 1/2"				
36"	7.07	3.93	161	4.29	169	4.34	171	4.47	174	5.19	190	5.59	200	5.80	204	6.24	213	1'	1'- 4"	10'- 6"	5'- 4"	1'	1'- 4"	10'- 6"	5'- 4"				

QUANTITIES SHOWN BELOW ARE FOR ONE HEADWALL.

RCP/ HDPE SIZE DIA.	LENGTH OF REINFORCING BARS																			
	SINGLE RCP/HDPE					SINGLE OR DOUBLE RCP/HDPE										DOUBLE RCP/HDPE				
	0°-45°	0°	15°	30°	45°	0°	15°		30°		45°		0°-45°	0°	15°	30°	45°			
	NO. 4	NO. 5	NO. 5	NO. 5	NO. 5	NO. 4	NO. 4	NO. 4	NO. 4	NO. 4	NO. 4	NO. 4	NO. 4	NO. 5	NO. 5	NO. 5	NO. 5			
	K	N	N	N	N	M	M	M1	M	M1	M	M1	K	N	N	N	N			
12"	602'-9"	204'-9"	205'-2"	205'-																

RCP/ HDPE SIZE DIA.	RCP/ HDPE AREA SQ. FT.	SINGLE RCP/HDPE								DOUBLE RCP/HDPE								X	Y	L	h
		0° SKEW		15° SKEW		30° SKEW		45° SKEW		0° SKEW		15° SKEW		30° SKEW		45° SKEW					
		CONC CU YD	STEEL LB	CONC CU YD	STEEL LB	CONC CU YD	STEEL LB	CONC CU YD	STEEL LB	CONC CU YD	STEEL LB	CONC CU YD	STEEL LB	CONC CU YD	STEEL LB	CONC CU YD	STEEL LB				
12"	0.79	1.00	46	1.09	49	1.10	49	1.14	50	1.41	59	1.52	62	1.58	64	1.73	67	10"	1' - 2"	4'	3'
15"	1.23	1.32	55	1.45	58	1.47	59	1.52	60	1.80	70	1.93	73	2.01	75	2.18	79	10 1/4"	1' - 2 1/4"	5'	3' - 3 1/2"
18"	1.77	1.62	69	1.77	73	1.80	74	1.85	75	2.15	85	2.31	89	2.40	91	2.60	96	10 1/2"	1' - 2 1/2"	5' - 9"	3' - 7"
21"	2.41	1.95	77	2.13	82	2.16	83	2.23	85	2.59	95	2.79	101	2.90	103	3.13	108	10 3/4"	1' - 2 3/4"	6' - 6"	3' - 10 1/2"
24"	3.14	2.27	96	2.48	102	2.52	103	2.60	105	3.01	116	3.24	122	3.37	125	3.64	131	11"	1' - 3"	7' - 3"	4' - 2"
27"	3.98	2.62	105	2.86	111	2.90	112	2.99	114	3.48	128	3.75	134	3.89	137	4.21	144	11"	1' - 3"	8'	4' - 5"
30"	4.91	3.08	117	3.37	123	3.41	124	3.44	127	4.07	141	4.38	148	4.55	152	4.90	159	11 1/2"	1' - 3 1/2"	9'	4' - 9"
33"	5.94	3.50	125	3.82	132	3.87	134	3.98	137	4.62	153	4.98	160	5.17	164	5.56	172	11 3/4"	1' - 3 3/4"	9' - 9"	5' - 1 1/2"
36"	7.07	3.93	161	4.29	169	4.34	171	4.47	174	5.19	190	5.59	200	5.80	204	6.24	213	1"	1' - 4"	10' - 6"	5' - 4"

RCP/ HDPE SIZE DIA.	LENGTH OF REINFORCING BARS																			
	SINGLE RCP/HDPE					SINGLE OR DOUBLE RCP/HDPE								DOUBLE RCP/HDPE						
	0° -45°		0°	15°	30°	45°	0°	15°			30°			45°		0° -45°	0°	15°	30°	45°
	NO. 4	NO. 5	NO. 5	NO. 5	NO. 5	NO. 4	NO. 4	NO. 4	NO. 4	NO. 4	NO. 4	NO. 4	NO. 4	NO. 4	NO. 4	NO. 4	NO. 5	NO. 5	NO. 5	NO. 5
	K	N	N	N	N	M	M	M	M	M	M	M	M	M	M	M	K	N	N	N
12"	6Ø2'-9"	2Ø4'-9"	2Ø5'-2"	2Ø5'-4"	2Ø5'-7"	2Ø1'-7"	1Ø1'-5"	1Ø2'-1"	1Ø1'-4"	1Ø2'-2"	1Ø1'-1"	1Ø2'-5"	7Ø2'-9"	2Ø7'	2Ø7'-6"	2Ø7'-11"	2Ø8'-9"			
15"	6Ø3'-1"	2Ø6'	2Ø6'-6"	2Ø6'-8"	2Ø7'	2Ø2'-1"	1Ø1'-11"	1Ø2'-8"	1Ø1'-10"	1Ø2'-9"	1Ø1'-7"	1Ø3'	7Ø3'-1"	2Ø8'-6"	2Ø9'-2"	2Ø9'-7"	2Ø10'-7"			
18"	6Ø3'-4"	2Ø7'	2Ø7'-8"	2Ø7'-10"	2Ø8'-2"	4Ø2'-5"	2Ø2'-3"	2Ø3'-1"	2Ø2'-2"	2Ø3'-2"	2Ø1'-11"	2Ø3'-5"	7Ø3'-4"	2Ø9'-9"	2Ø10'-6"	2Ø11'	2Ø12'-1"			
21"	6Ø3'-8"	2Ø8'	2Ø8'-9"	2Ø8'-11"	2Ø9'-5"	4Ø2'-9"	2Ø2'-7"	2Ø3'-6"	2Ø2'-6"	2Ø3'-7"	2Ø2'-3"	2Ø3'-10"	7Ø3'-8"	2Ø11'-2"	2Ø12'	2Ø12'-7"	2Ø13'-10"			
24"	8Ø3'-11"	2Ø9'	2Ø9'-10"	2Ø10'-1"	2Ø10'-7"	4Ø3'-2"	2Ø3'	2Ø4'	2Ø2'-11"	2Ø4'-1"	2Ø2'-8"	2Ø4'-4"	9Ø3'-11"	2Ø12'-7"	2Ø13'-7"	2Ø14'-2"	2Ø15'-8"			
27"	8Ø4'-2"	2Ø10'	2Ø10'-11"	2Ø11'-2"	2Ø11'-9"	4Ø3'-6"	2Ø3'-4"	2Ø4'-4"	2Ø3'-3"	2Ø4'-5"	2Ø3'	2Ø4'-8"	9Ø4'-2"	2Ø14'-1"	2Ø15'-1"	2Ø15'-10"	2Ø17'-6"			
30"	8Ø4'-6"	2Ø11'-3"	2Ø12'-3"	2Ø12'-7"	2Ø13'-2"	4Ø4'	2Ø3'-10"	2Ø5'	2Ø3'-9"	2Ø5'-1"	2Ø3'-6"	2Ø5'-4"	9Ø4'-6"	2Ø15'-9"	2Ø16'-11"	2Ø17'-9"	2Ø19'-7"			
33"	8Ø4'-10"	2Ø12'-3"	2Ø13'-4"	2Ø13'-8"	2Ø14'-4"	4Ø4'-3"	2Ø4'-1"	2Ø5'-3"	2Ø4'	2Ø5'-4"	2Ø3'-9"	2Ø5'-7"	9Ø4'-10"	2Ø17'-3"	2Ø18'-6"	2Ø19'-5"	2Ø21'-5"			
36"	10Ø5'-1"	2Ø13'-3"	2Ø14'-5"	2Ø14'-9"	2Ø15'-7"	6Ø4'-8"	3Ø4'-6"	3Ø5'-9"	3Ø4'-5"	3Ø5'-10"	3Ø4'-2"	3Ø6'-1"	11Ø5'-1"	2Ø18'-8"	2Ø20'	2Ø21'	2Ø23'-2"			

1. CONCRETE SHALL BE CLASS A OR AA.
2. REINFORCING STEEL SHALL BE DEFORMED BARS WITH MAXIMUM SPACING OF 18" SET 2 1/2" CLEAR OF SURFACE OF CONCRETE EXCEPT AS NOTED. BAR ENDS SHALL BE KEPT 1 1/2" CLEAR OF SURFACE OF CONCRETE. REINFORCING BARS MAY BE CUT AND BENT IN FIELD.
3. FOOTINGS SHOWN ARE OF MINIMUM DEPTH AND SHALL BE EXTENDED IF SOIL IS UNSUITABLE OR LIABLE TO SCOUR.
4. CULVERT PIPES TO BE SET ON A SKEW SHALL BE MITERED WHEN HEADWALLS ARE CONSTRUCTED. WHEN HEADWALLS ARE NOT CONSTRUCTED THE PIPES SHALL NOT BE MITERED EXCEPT IN OVERFLOW SECTION.
5. FOR ESTIMATING HEADWALL QUANTITIES ON SKEWED CULVERTS:
0° to 10° - USE QUANTITIES FOR 0° SKEW.
11° to 25° - USE QUANTITIES FOR 15° SKEW.
26° to 40° - USE QUANTITIES FOR 30° SKEW.
41° to 55° - USE QUANTITIES FOR 45° SKEW.
OVER 55° - CALCULATE QUANTITIES REQUIRED.
CULVERTS SHOULD BE INSTALLED ON 5° INCREMENTS WHERE IT IS FEASIBLE.
6. DIMENSIONS X,Y,L, AND h TO REMAIN CONSTANT REGARDLESS OF MINOR VARIATIONS IN WALL THICKNESS DUE TO CLASS OR TYPE OF PIPE USED.
7. REFER TO SHEET R-2.9.1 FOR DETAILS IF CONNECTING TO HDPE PIPE.

NEVADA DEPARTMENT OF TRANSPORTATION

CULVERT HEADWALLS
12" TO 36" RCP/HDPE

H# _____ CLV DWG# _____



PLOT DATE: 03-17-16

GCL
ENGINEERS SURVEYORS

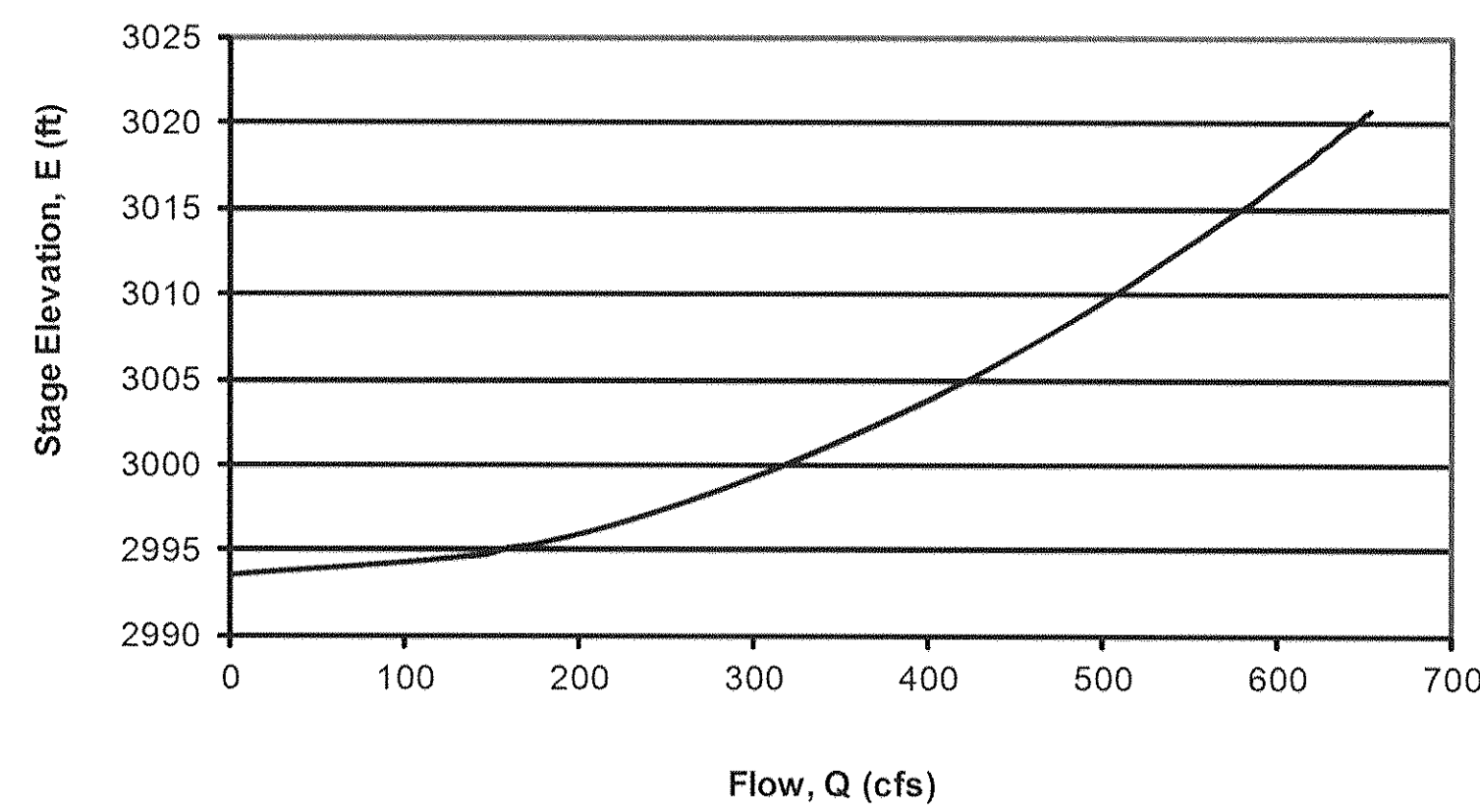
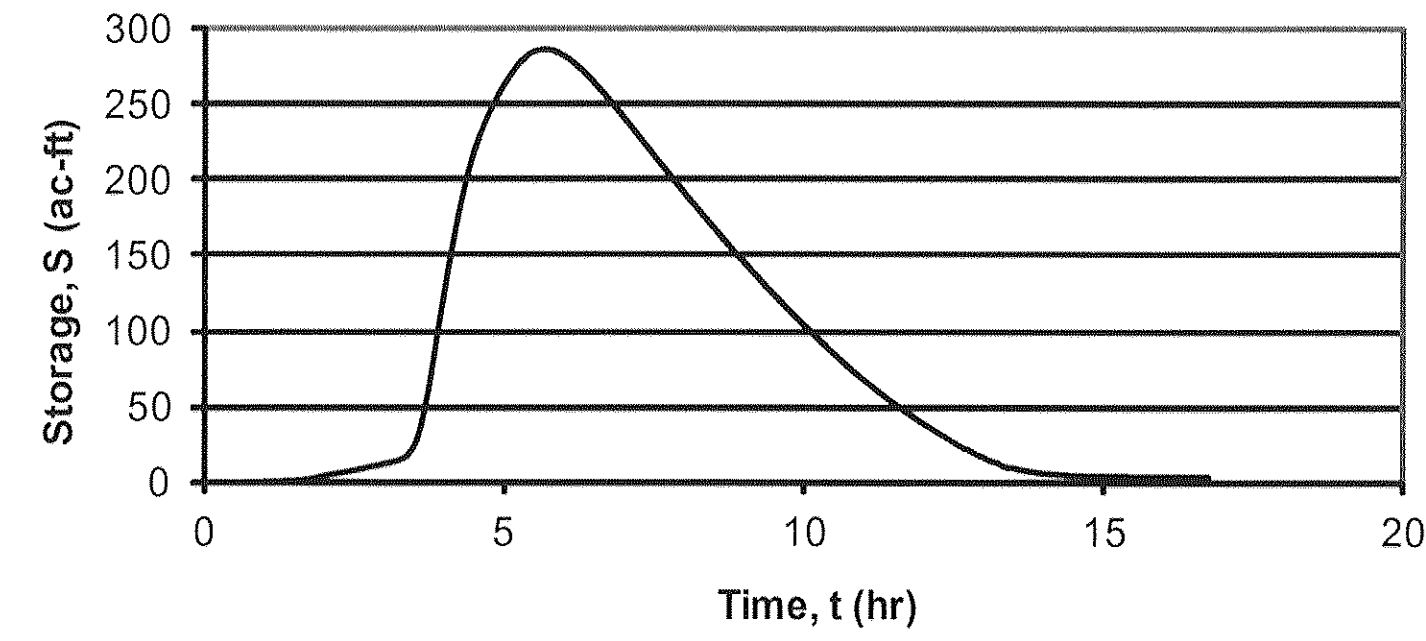
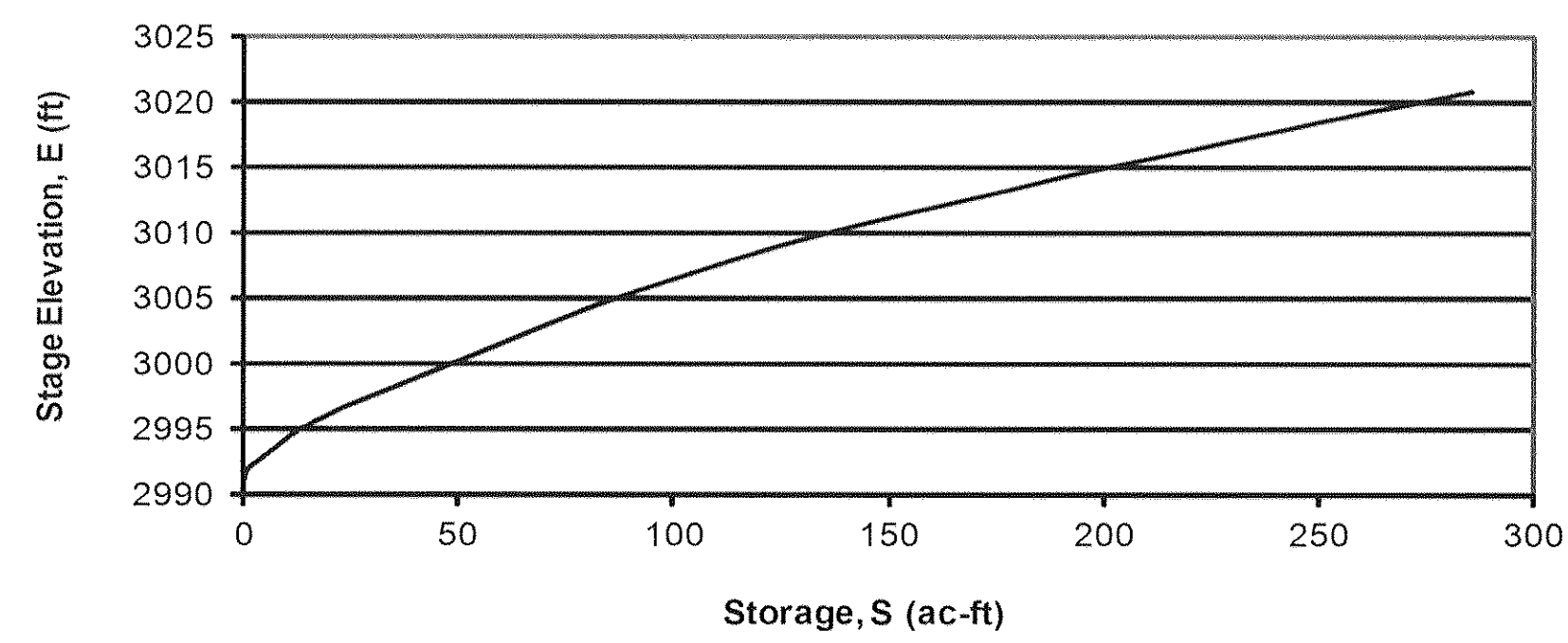
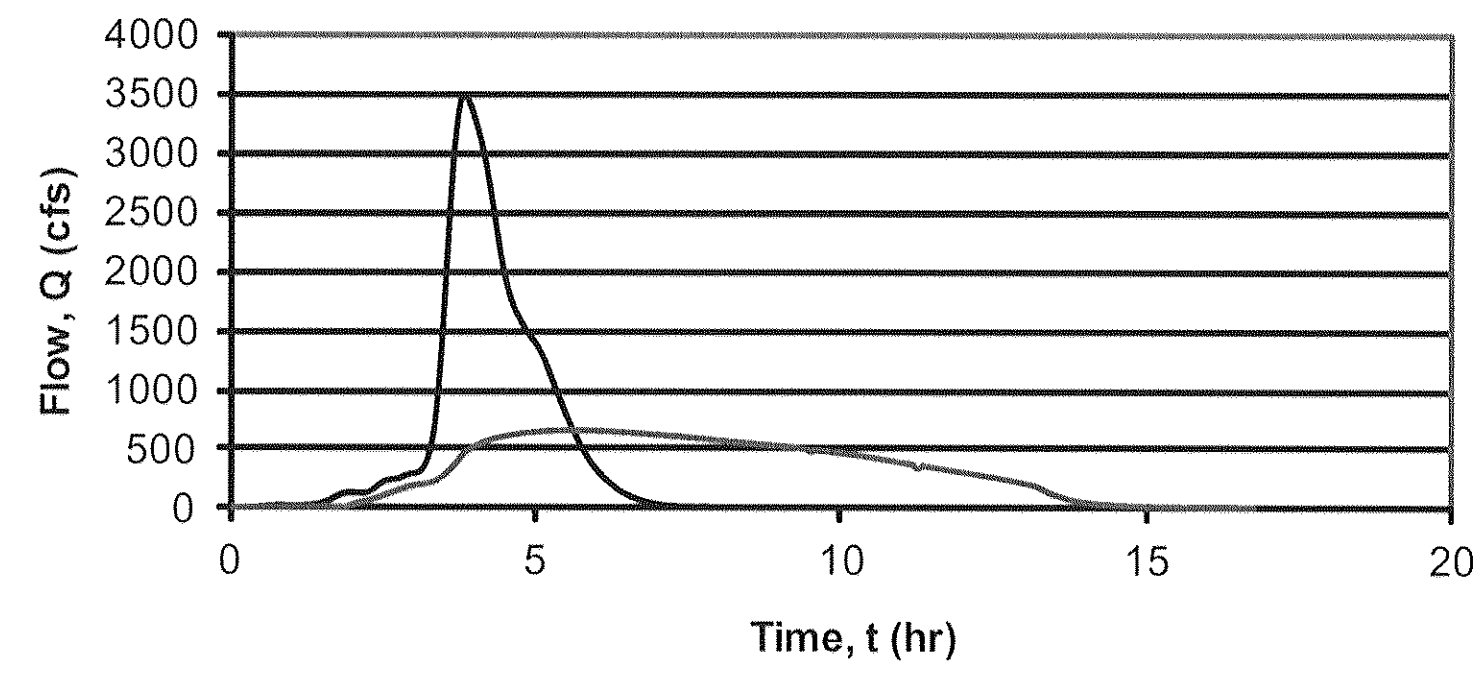
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DAO NGUYEN

SUMMERLIN VILLAGE 26 - REVERENCE OFFSITE DRAINAGE IMPROVEMENTS

DETAIL SHEET VII

D7

66 OF 87 SHTS



WESLEY T. PETTY
Exp. 12-31-15
CIVIL
No. 1639
STATE OF NEVADA
PROFESSIONAL ENGINEER

[illegible]

PROJECT NO.	764-204-013
DESIGN:	HN
DRAWN:	
CHECK:	WP
PLOT DATE:	03-17-16
PLOT TIME:	14:06:51

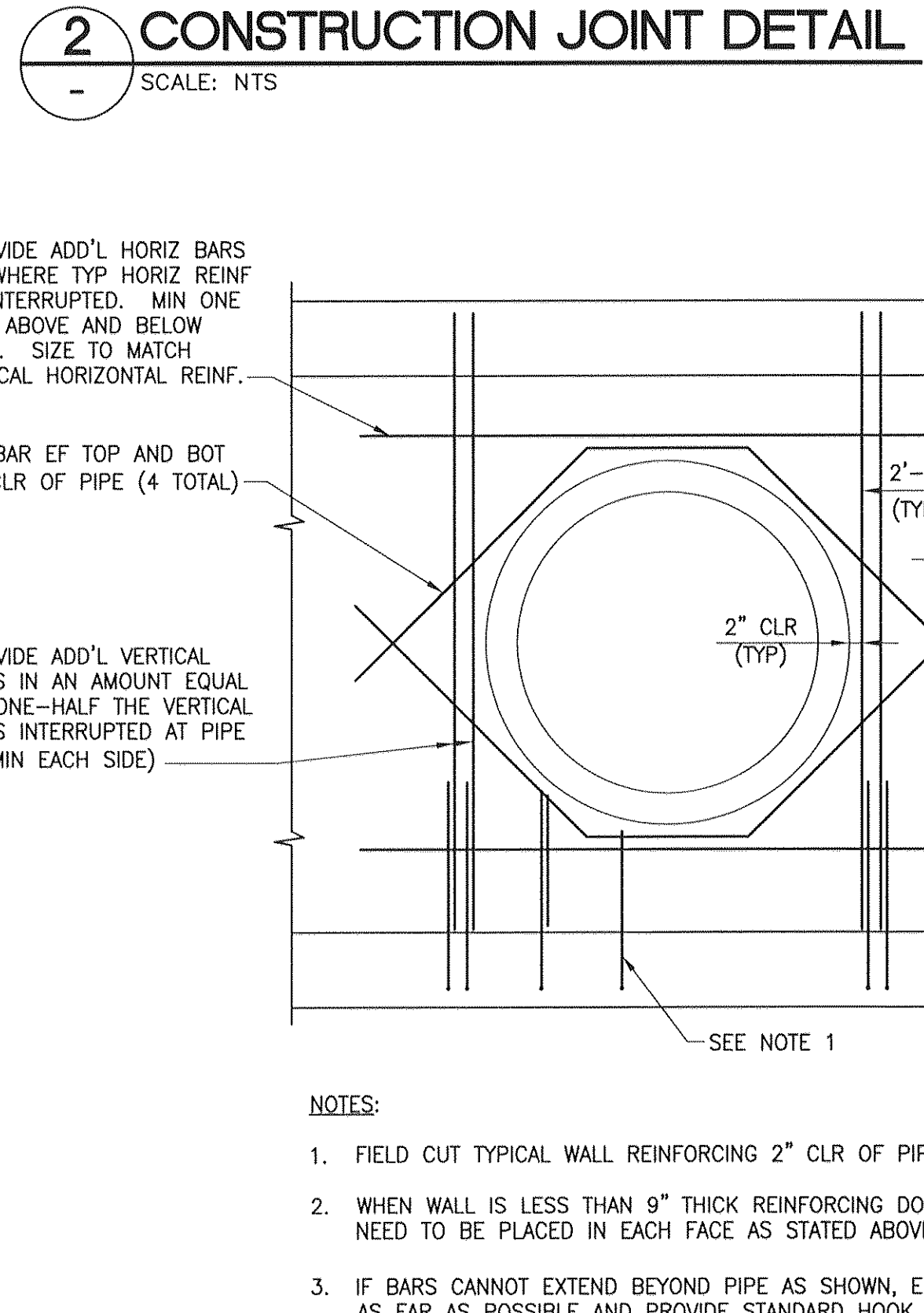
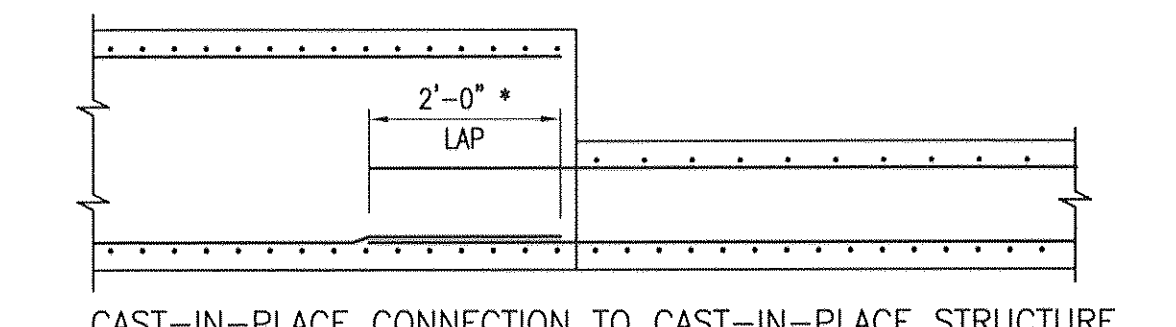
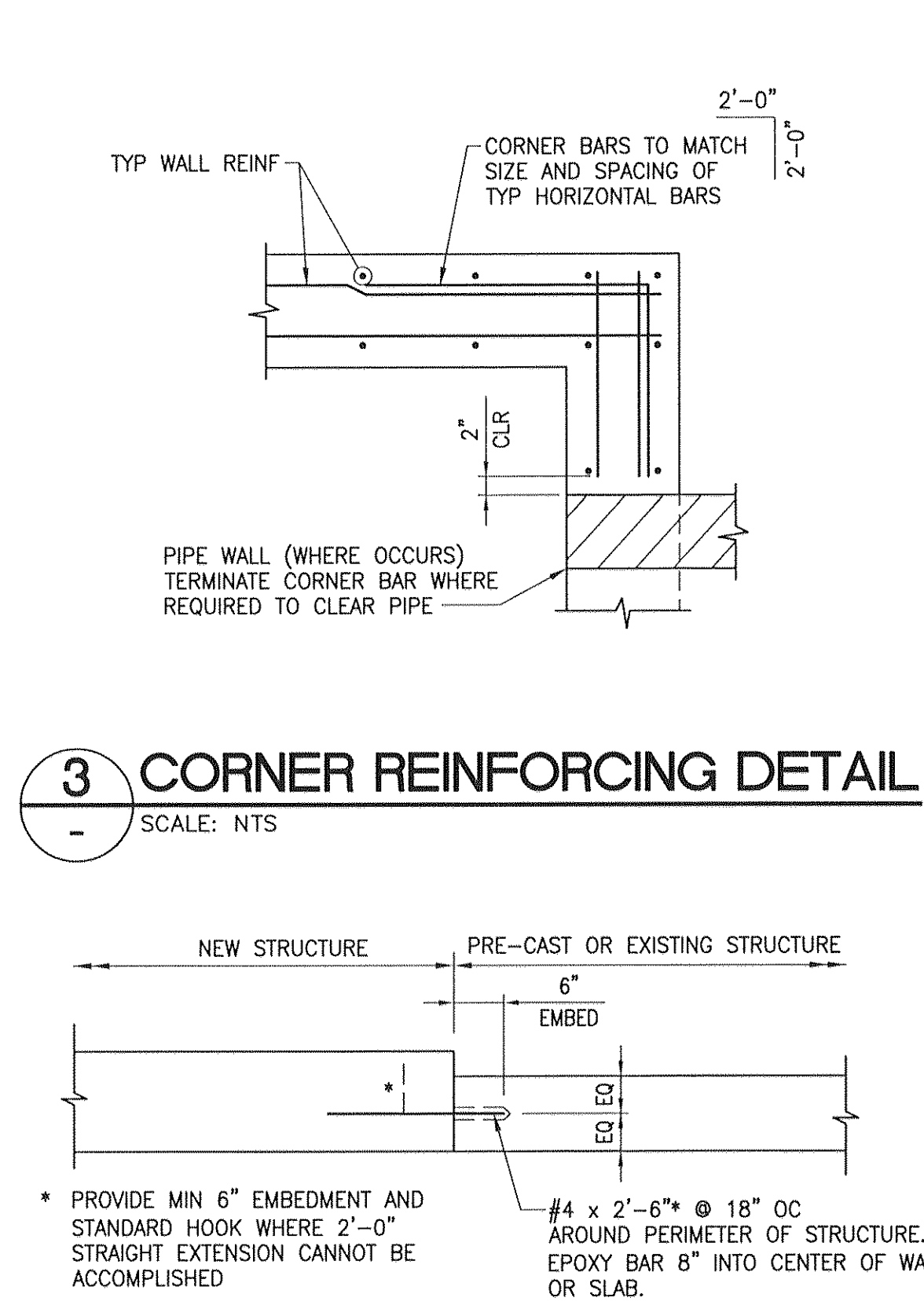
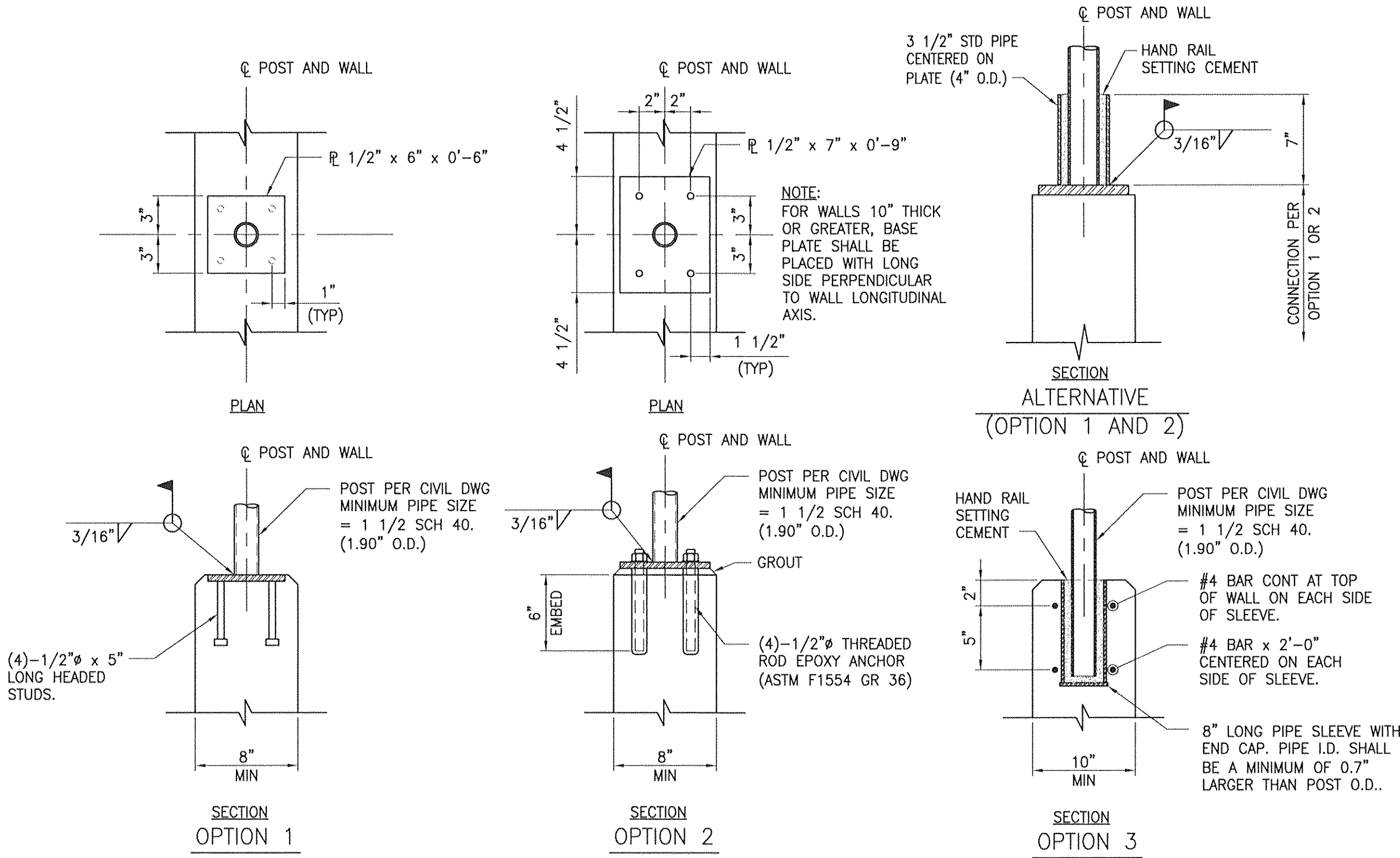
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gowngineering.com

F. PROPERTIES 700/764-204/-013/DWS PRODUCTION US DRAINAGE/015021/DWS
HAO, NGUYEN

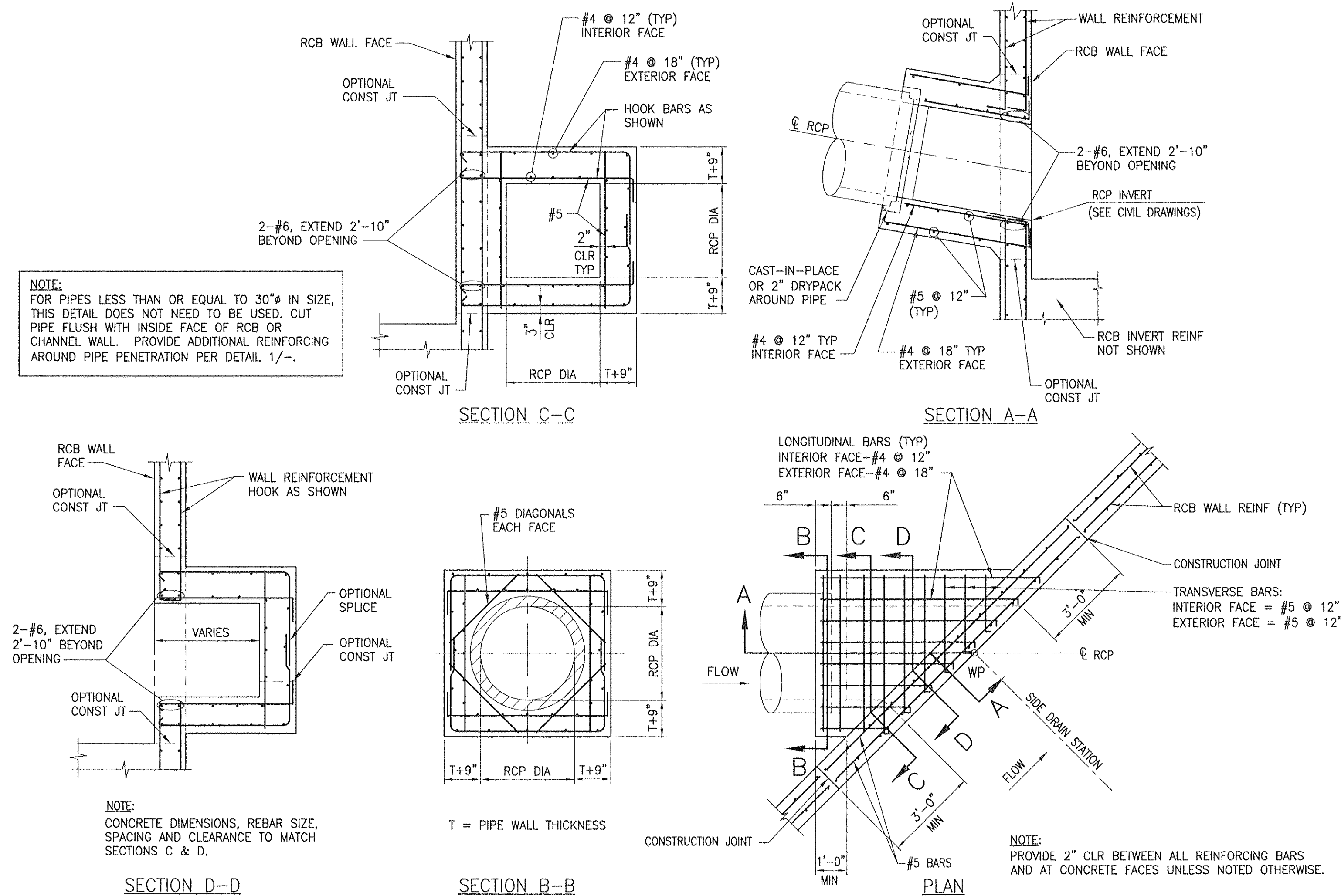
PULTE HOMES
SUMMERLIN VILLAGE 26 - REVERENCE OFFSITE DRAINAGE IMPROVEMENTS
STAGE/STORAGE BASIN PARAMETERS

DRAWING
D8
67 OF 87 SHTS



5 POST CONNECTION DETAIL

SCALE: NTS



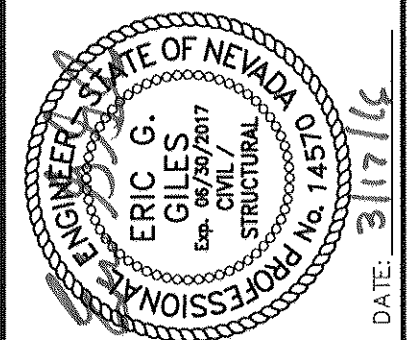
4 PIPE PENETRATION DETAIL

SCALE: NTS

GENERAL STRUCTURAL NOTES

- DESIGN SPECIFICATIONS:** AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SEVENTH EDITION, 2014.
- CONSTRUCTION SPECIFICATIONS:** CLARK COUNTY UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION EXCEPT AS NOTED BELOW AND IN THE SPECIAL PROVISIONS FOR THIS CONTRACT.
- EXISTING UTILITIES:** THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES WITHIN THE WORK AREA, AND PROVIDING PROTECTION FOR THE VARIOUS UTILITIES AFFECTED PRIOR TO PROCEEDING WITH THE WORK.
- CONCRETE:** CONCRETE SHALL BE CLASS D MODIFIED AND SHALL HAVE A MAXIMUM WATER TO CEMENT RATIO, BY WEIGHT, OF 0.45. USE TYPE V CEMENT PER ASTM C-150. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4", UNLESS NOTED OTHERWISE. CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE AS FOLLOWS:

 $f'_c = 4,500$ PSI UNLESS NOTED OTHERWISE
 $f'_c = 5,000$ PSI FOR SPILLWAY SECTIONS
 $f'_c = 6,000$ PSI FOR CHANNEL SECTIONS WITH 1" SACRIFICIAL LAYER
- REINFORCING STEEL:** ALL REINFORCING STEEL SHALL BE ASTM A615 GRADE 60. DIMENSIONS ARE FROM OUT TO OUT OF BARS. MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 3" WHERE CONCRETE IS CAST AGAINST SOIL AND 2" ELSEWHERE, UNLESS NOTED OTHERWISE. HOOKS MAY BE ROTATED OR TILTED AS NECESSARY TO PROVIDE THE PROPER CLEARANCES.
- BEDDING MATERIAL:** BEDDING MATERIAL SHALL BE 6-INCHES OF TYPE II AGGREGATE BASE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY. EXPOSED NATIVE SOILS IN BOTTOMS OF EXCAVATIONS SHALL BE SCARIFIED TO A DEPTH OF 6-INCHES, MOISTURE-CONDITIONED TO WITHIN 2% OF OPTIMUM MOISTURE CONTENT AND COMPACTED TO 95%.
- EPOXY:** EPOXY SHALL BE SIMPSON STRONG-TIE "SET-XP EPOXY-TIE ADHESIVE" PER ICC REPORT ESR-2508 OR APPROVED EQUAL. INSTALL IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
- STRUCTURAL STEEL:** ALL MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36 UNLESS NOTED OTHERWISE. ALL HOLLOW STRUCTURAL SECTION (HSS) TUBE SHAPES SHALL BE ASTM A500, GRADE B. ALL W-SECTIONS SHALL BE ASTM A992. ALL PIPE SECTIONS SHALL BE ASTM A53 GR. B.
- GALVANIZING:** ALL EXPOSED METAL AND METAL PARTS SHALL BE GALVANIZED. GALVANIZING DAMAGED BY FABRICATION SHALL RECEIVE TWO COATS OF ZINC RICH PAINT (GALVANOX OR EQUAL).
- INVERTS, SLOPES, BEARINGS, ALIGNMENTS, AND ELEVATIONS** SHOWN ARE FOR "REFERENCE ONLY". INFORMATION ON CIVIL DRAWINGS SHALL GOVERN.
- CONTRACTOR SHALL PROVIDE SLOPE STABILIZATION, SHEETING, BRACING, AND/OR SHORING AS REQUIRED TO PROTECT EXISTING EMBANKMENTS, STRUCTURES, AND UNDERGROUND ITEMS.



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PROJECT NO.	764-204-013
DESIGN:	DAT
DRAWN:	DAT
CHECK:	EGG
PLOT DATE:	03-17-16
PLOT TIME:	14:35:29

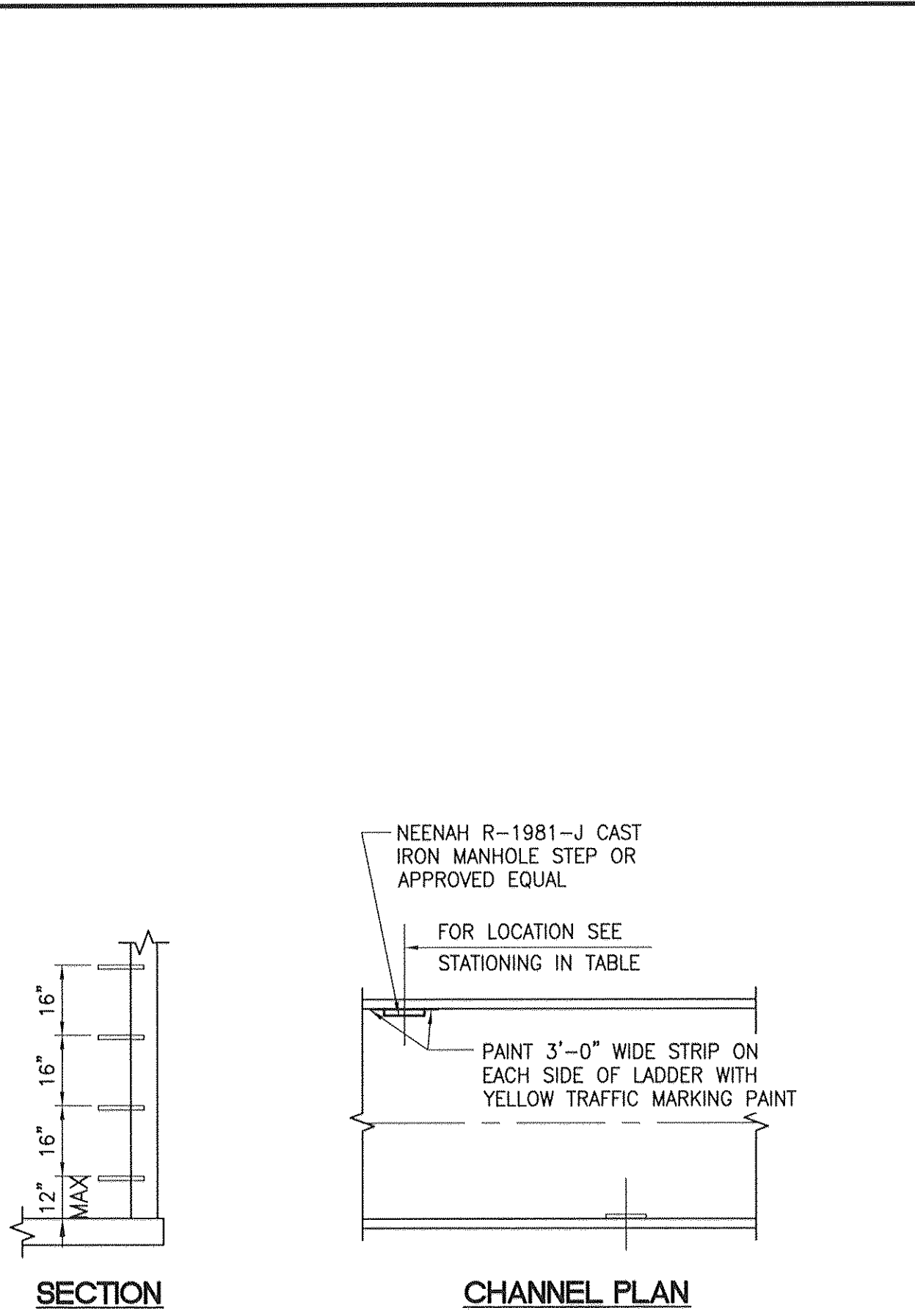
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PULTE HOMES
SUMMERLIN VILLAGE 26 - REVERENCE
OFF-SITE DRAINAGE IMPROVEMENTS
GENERAL STRUCTURAL NOTES
AND TYPICAL DETAILS

DRAWING
31
68 OF 87 SHTS

H# _____ CLV DWG# _____

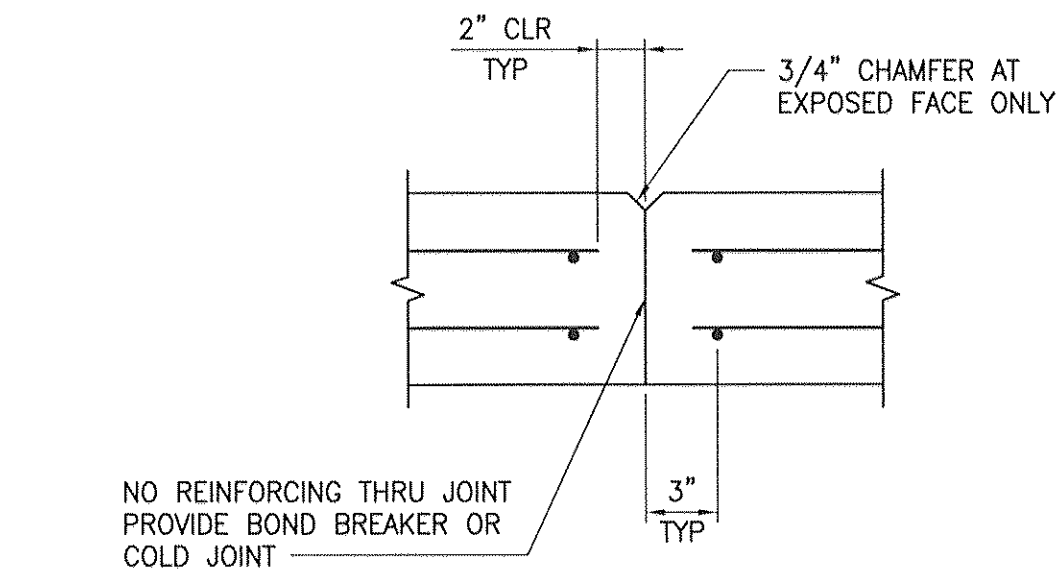
% COMPLETE



NOTE:
REFER TO DRAWING C3 FOR LADDER LOCATION TABLE.

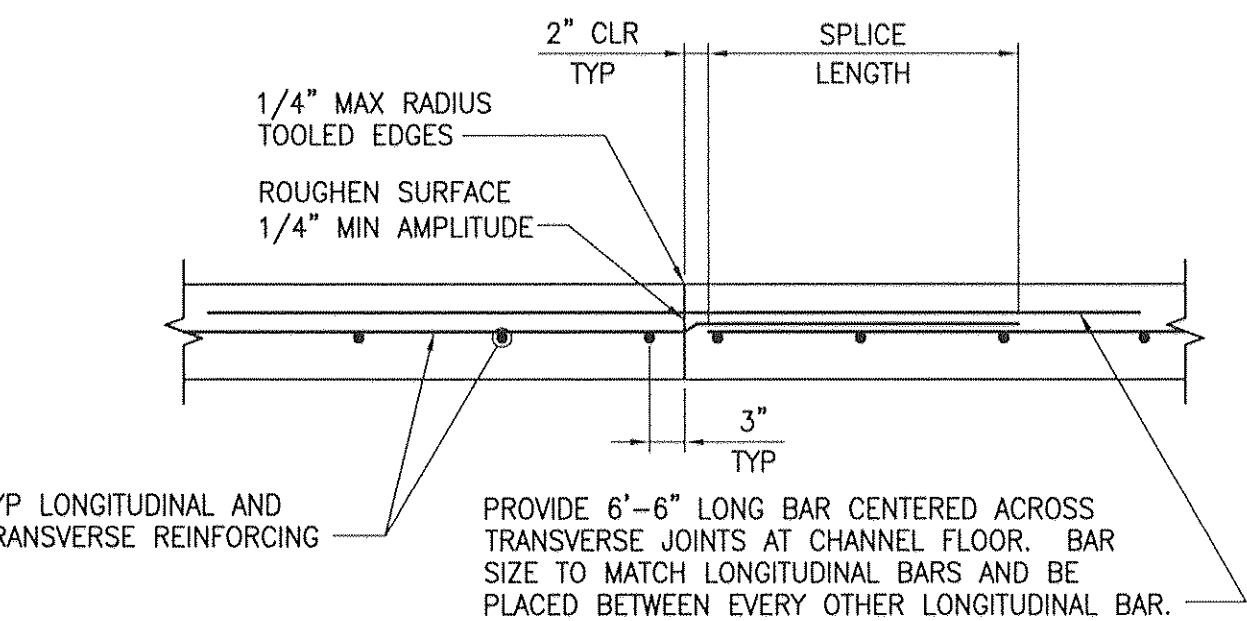
11 CHANNEL STEP DETAIL

SCALE: NTS



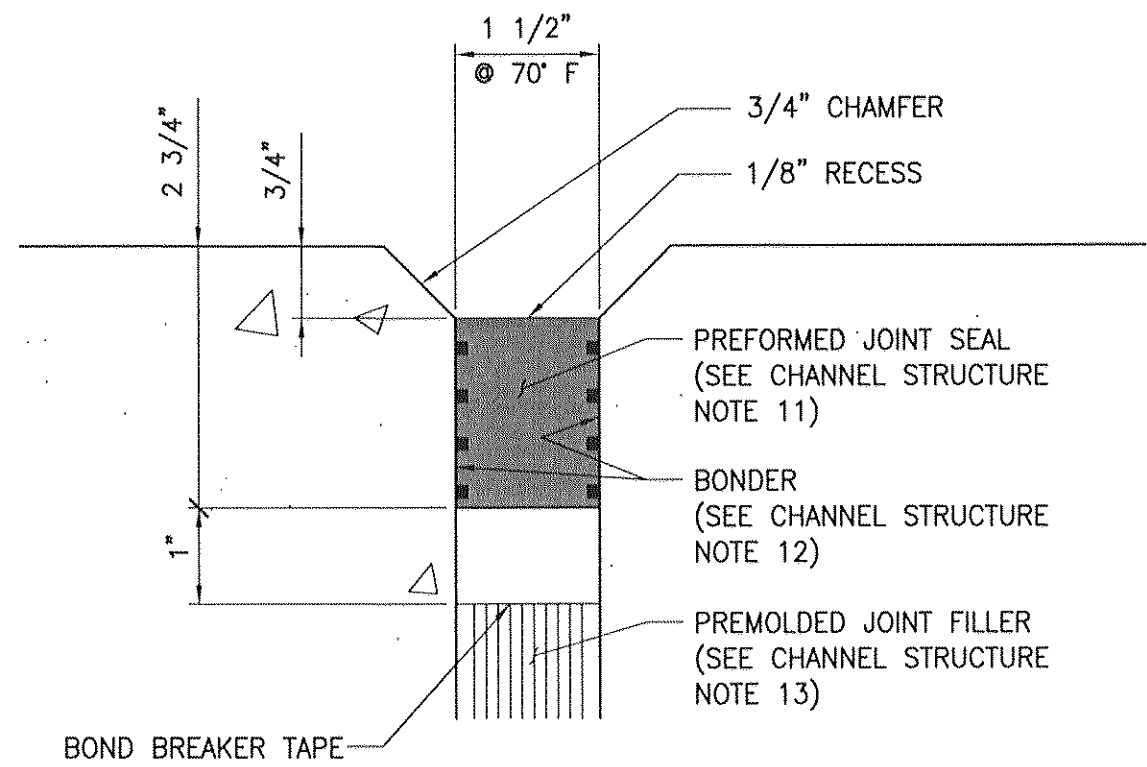
10 WALL CONTRACTION JOINT DETAIL

SCALE: NTS



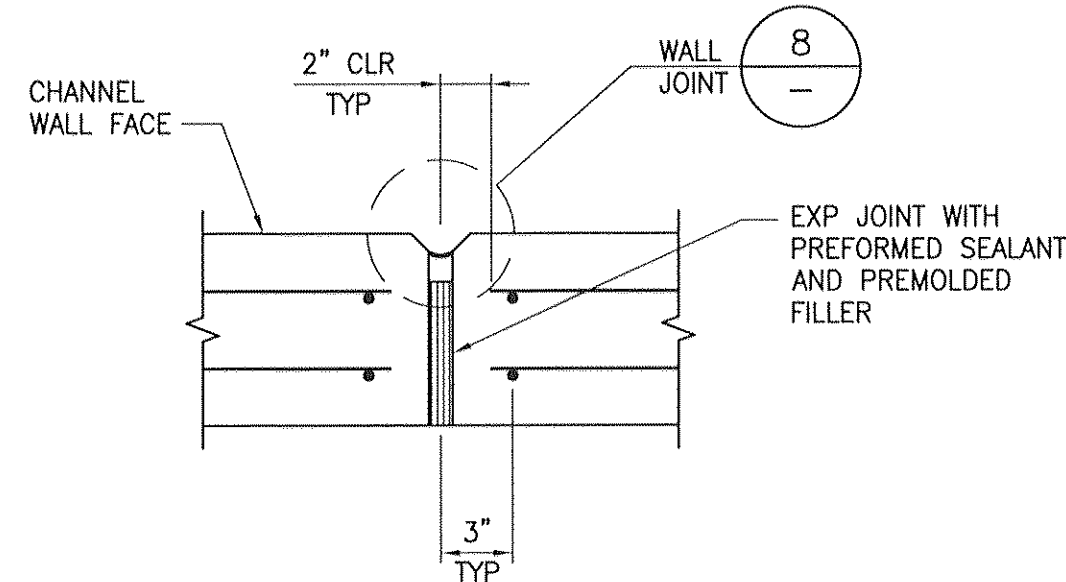
9 CONSTRUCTION JOINT DETAIL

SCALE: NTS



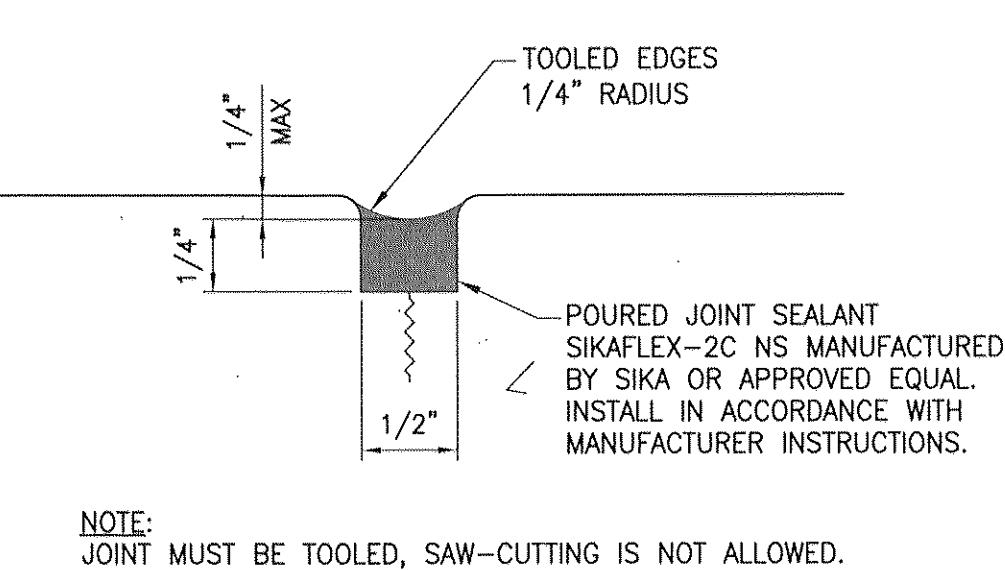
8 WALL JOINT SEALANT DETAIL

SCALE: NTS



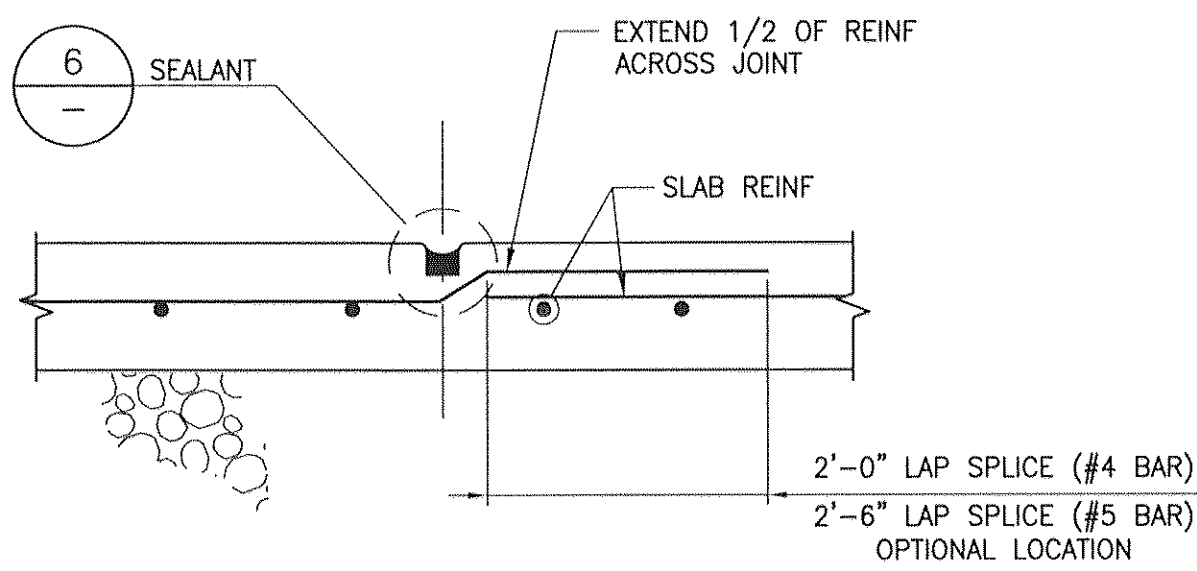
7 WALL EXPANSION JOINT DETAIL

SCALE: NTS



6 SEALANT DETAIL

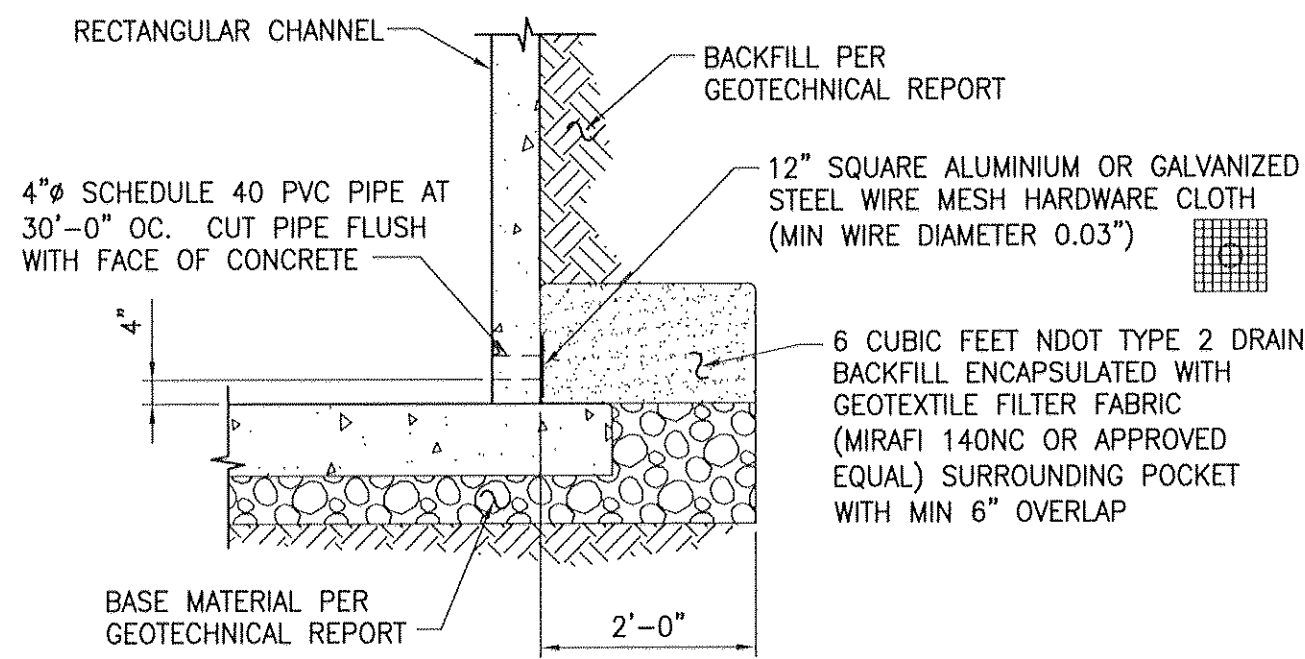
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NOTES:
1. SPRAY GALVANIZE REINFORCING BARS 9" EACH SIDE OF WEAKENED PLANE JOINT.

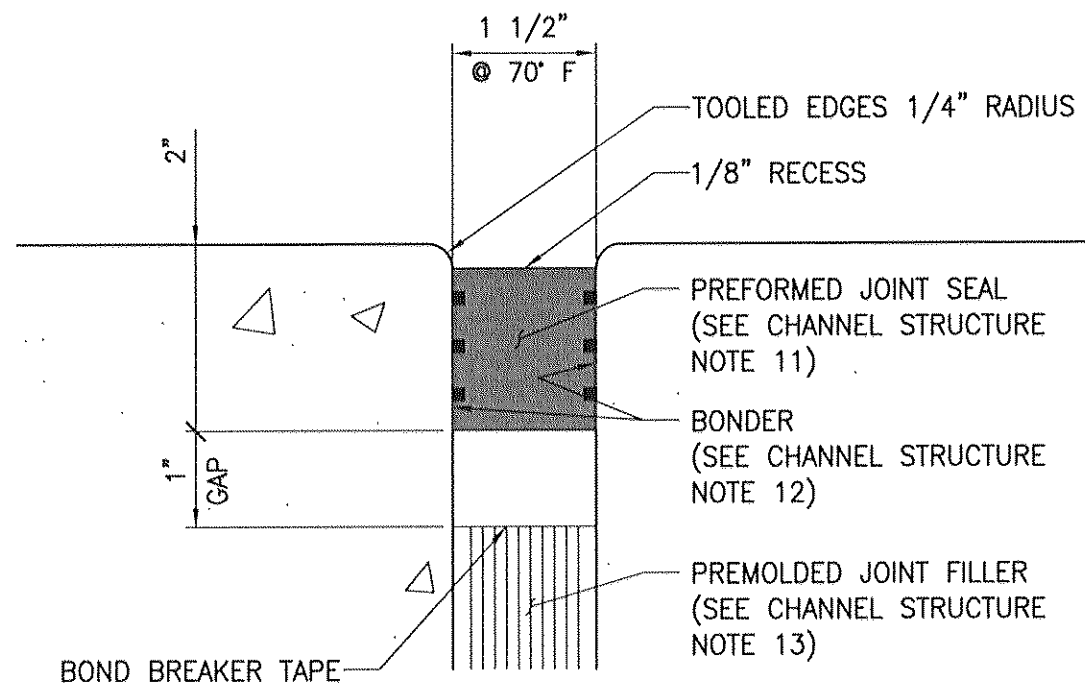
5 WEAKENED PLANE JOINT DETAIL

SCALE: NTS



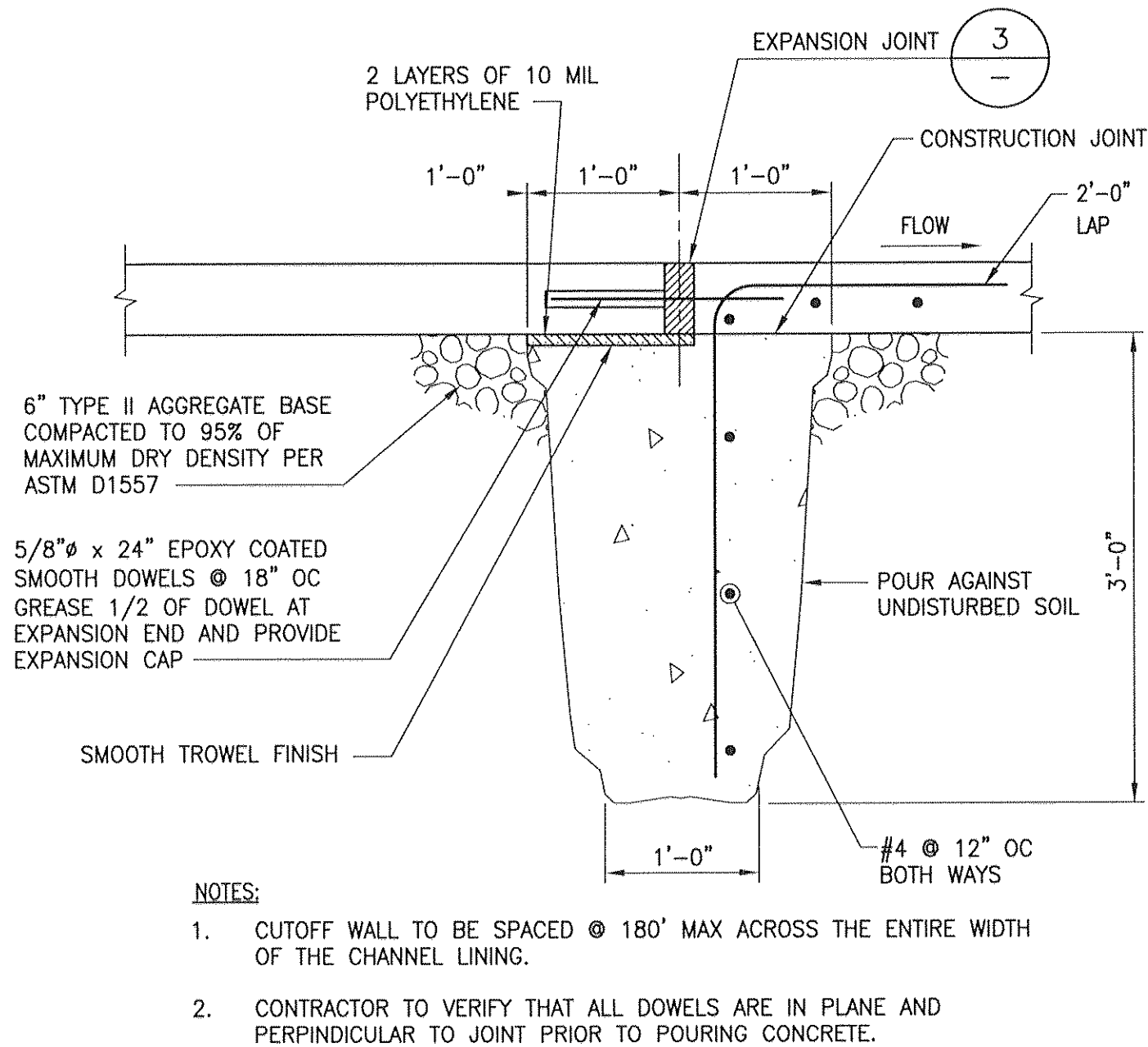
4 CHANNEL WEEPHOLE DETAIL

SCALE: NTS



3 SLAB EXPANSION JOINT DETAIL

SCALE: NTS

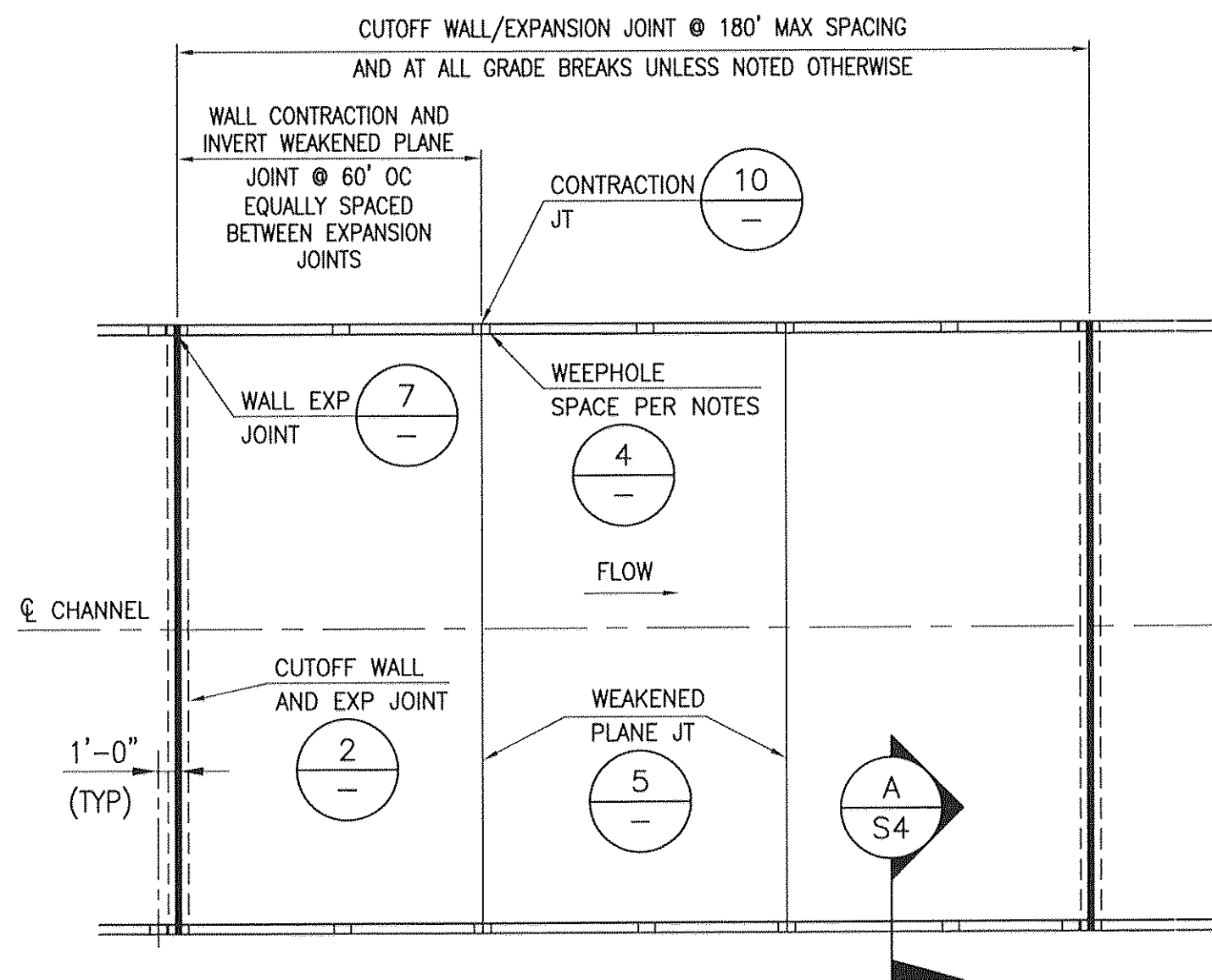


2 TRANSVERSE CUTOFF WALL AND EXPANSION JOINT

SCALE: NTS

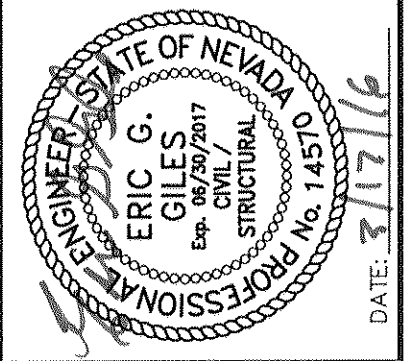
CHANNEL STRUCTURE NOTES

- TRANSVERSE AND LONGITUDINAL JOINTS IN INVERT SLAB AND SIDE SLOPE OF PAVED TRAPEZOIDAL CHANNELS AND WALLS FOR RECTANGULAR CHANNELS WILL BE REQUIRED AT THE END OF EACH CONTINUOUS POURING OPERATION. SEE TYPICAL CONSTRUCTION JOINT DETAIL. TRANSVERSE CONSTRUCTION JOINTS SHALL NOT BE PLACED WITHIN 20'-FEET OF A JUNCTION STRUCTURE OPENINGS, OR WITHIN 50 FEET OF AN EXPANSION JOINT.
- ALL TRANSVERSE JOINTS IN WALLS AND SLABS (CONSTRUCTION, WEAKENED, CONTRACTION AND EXPANSION) SHALL BE IN THE SAME PLANE. NO STAGGERING OF JOINTS WILL BE PERMITTED UNLESS SHOWN OTHERWISE. TRANSVERSE CONSTRUCTION JOINTS SHALL BE NORMAL OR RADIAL TO CENTERLINE OF CONSTRUCTION.
- ALL SINGLE LAYER REINFORCEMENT SHALL BE PLACED IN THE CENTER OF CONCRETE UNLESS NOTED OTHERWISE.
- IN CURVED CHANNEL SECTIONS, TRANSVERSE BARS SHALL BE PLACED NORMAL TO THE CHANNEL CENTERLINE.
- IN CURVED CHANNEL SECTIONS, THE MAXIMUM SPACING OF BARS SHALL NOT EXCEED THAT SHOWN FOR TYPICAL SECTIONS. STEEL SHALL BE PLACED RADIAL FROM THE MAXIMUM SPACING.
- IN CURVED ALIGNMENT SECTIONS, TRANSVERSE JOINTS SHALL BE NORMAL TO CENTERLINE AND SHALL NOT EXCEED 60" MAX SPACING.
- AT THE BEGINNING AND ENDING OF ALL POURS, A COMPLETE CURTAIN OF MAIN REINFORCEMENT SHALL BE PLACED 3-INCHES FROM THE TRANSVERSE CONSTRUCTION, CONTRACTION AND EXPANSION JOINTS.
- WEEPHOLES IN CHANNEL WALLS WILL BE REQUIRED AT 30'-FEET OC.
- WEAKENED PLANE JOINTS TO BE CENTERED WITH WEEPHOLES WHEN JOINTS OCCUR.
- DO NOT LOCATE CUTOFF WALLS WHERE A CONFLICT WITH EXISTING UTILITIES WILL OCCUR.
- PREFORMED EXPANSION JOINT SEAL:** PHYZITE 380 WITH H.A.S. MANUFACTURED BY CHASE CONSTRUCTION PRODUCTS OR APPROVED EQUAL. SIZE AND INSTALL SEAL IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS. THE WIDTH OF THE SEAL SHALL BE 25% GREATER THAN THE WIDTH OF THE JOINT AT THE TIME OF INSTALLATION. MEASURE WIDTH OF JOINT AFTER INITIAL SHRINKAGE AND THERMAL MOVEMENT HAS OCCURRED. ALL JOINTS IN THE COMPRESSION SEAL SHALL BE HEAT WELDED. THE JOINT MATERIAL SHALL HAVE E.S.P. (ENGINEERED SURFACE PREPARATION) GROOVES PER MANUFACTURER RECOMMENDATIONS.
- BONDER:** EVA-POX BONDER NO. 1 MANUFACTURED BY CHASE CONSTRUCTION PRODUCTS OR APPROVED EQUAL. APPLY TO BOTH SIDES OF SEAL AND CONCRETE. BONDER SHALL FILL THE GROOVES OF THE SEAL.
- PREMOLDED JOINT FILLER:** EVA-SEAL 30 WITH 2" TERRA-STRIP MANUFACTURED BY CHASE CONSTRUCTION PRODUCTS OR APPROVED EQUAL. INSTALL IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS.



1 TYPICAL RECTANGULAR CHANNEL PLAN

SCALE: NTS



PROJECT NO.	DESIGN	DAT	DRAWN	CHECK	EGG	PLOT DATE	TIME
764-204-013						03-17-16	14:35:15

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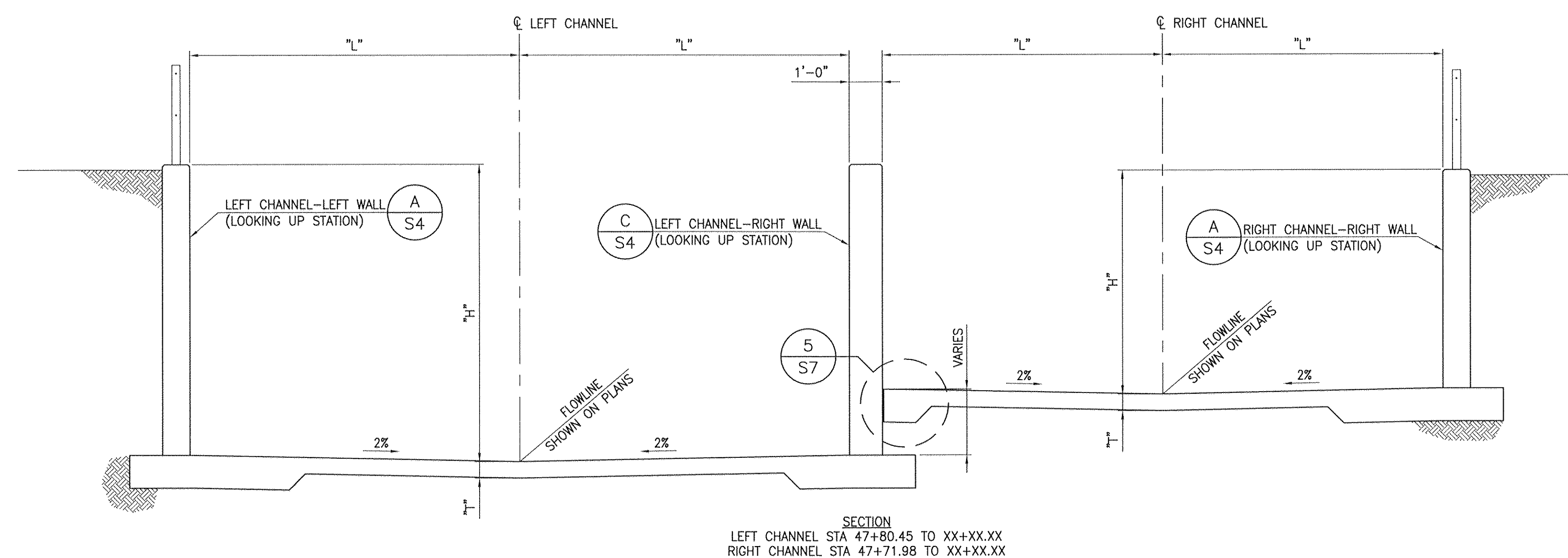
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SEAN MOYA

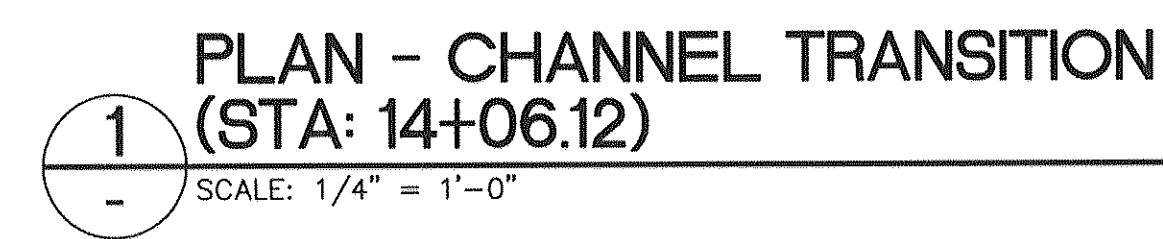
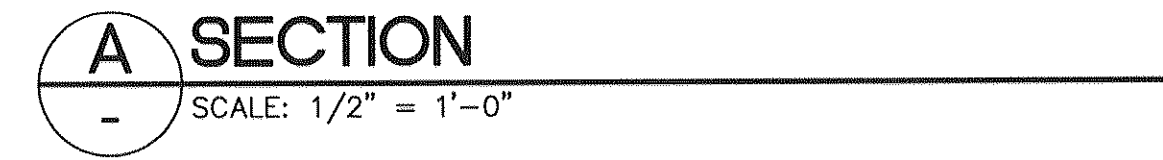
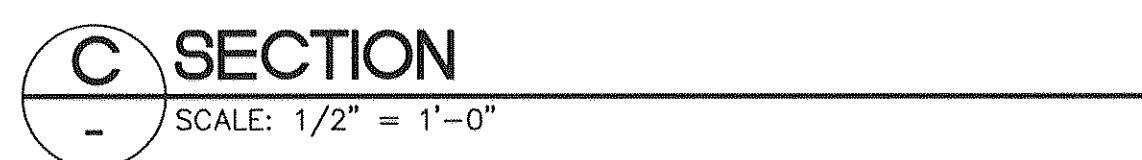
PULTE HOMES

SUMMERLIN VILLAGE 26 - REVERENCE
OFFSITE DRAINAGE IMPROVEMENTS

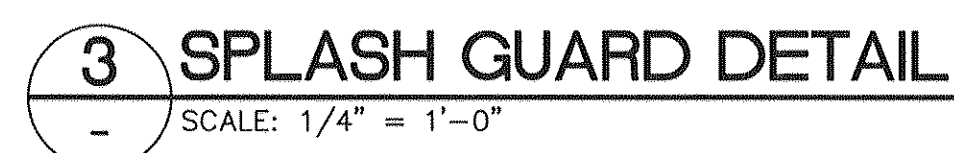
TYPICAL RECTANGULAR CHANNEL DETAILS

DRAWING
S2
69 OF 87 SHTS



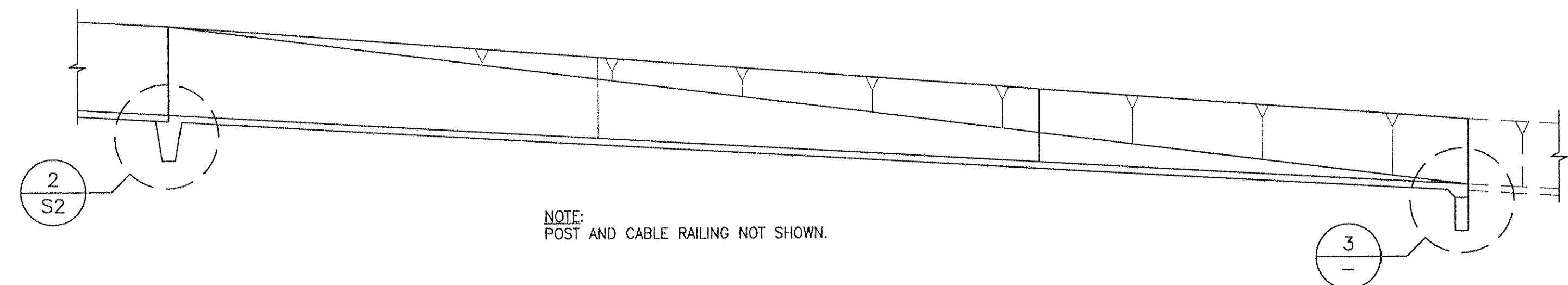


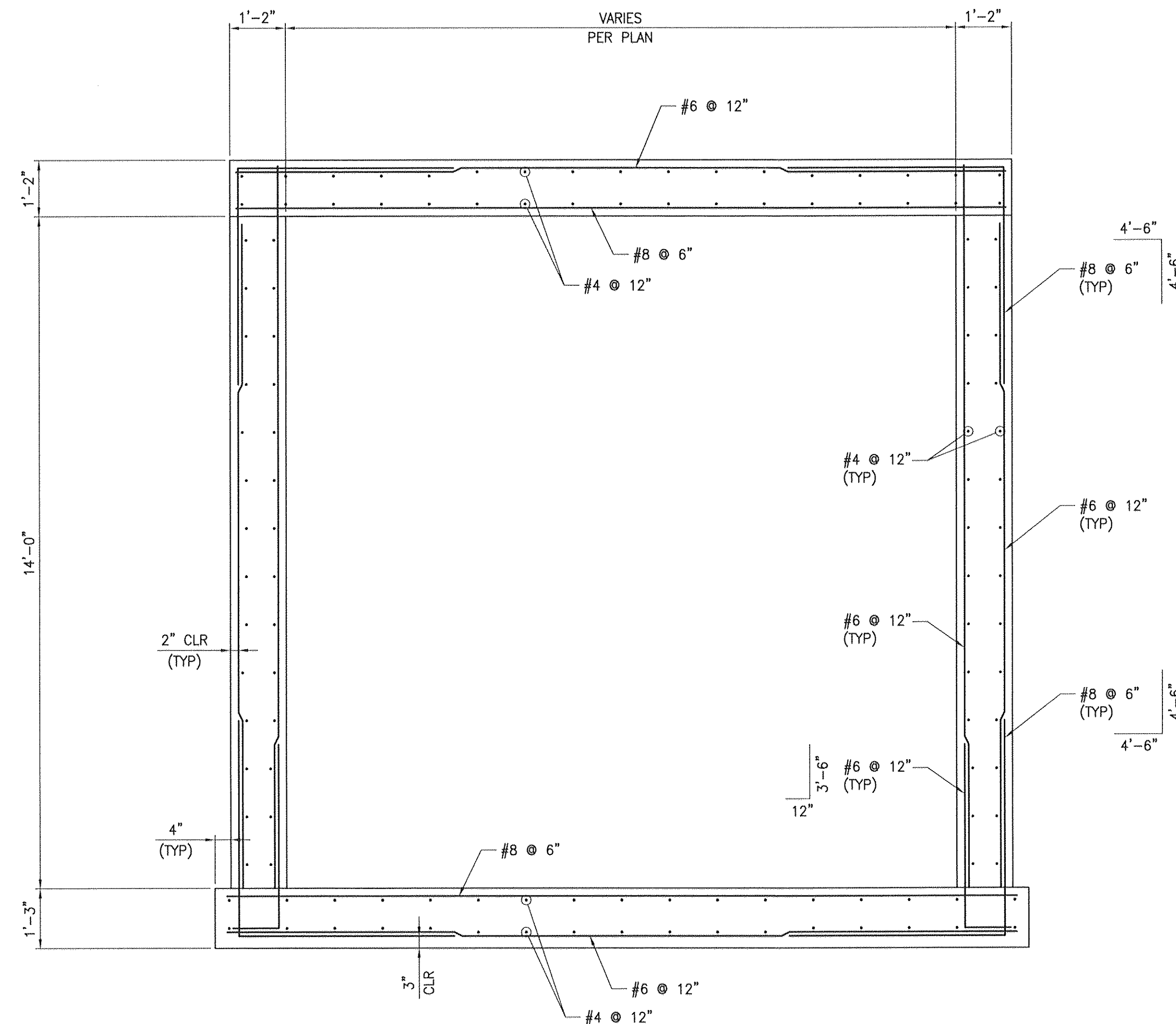




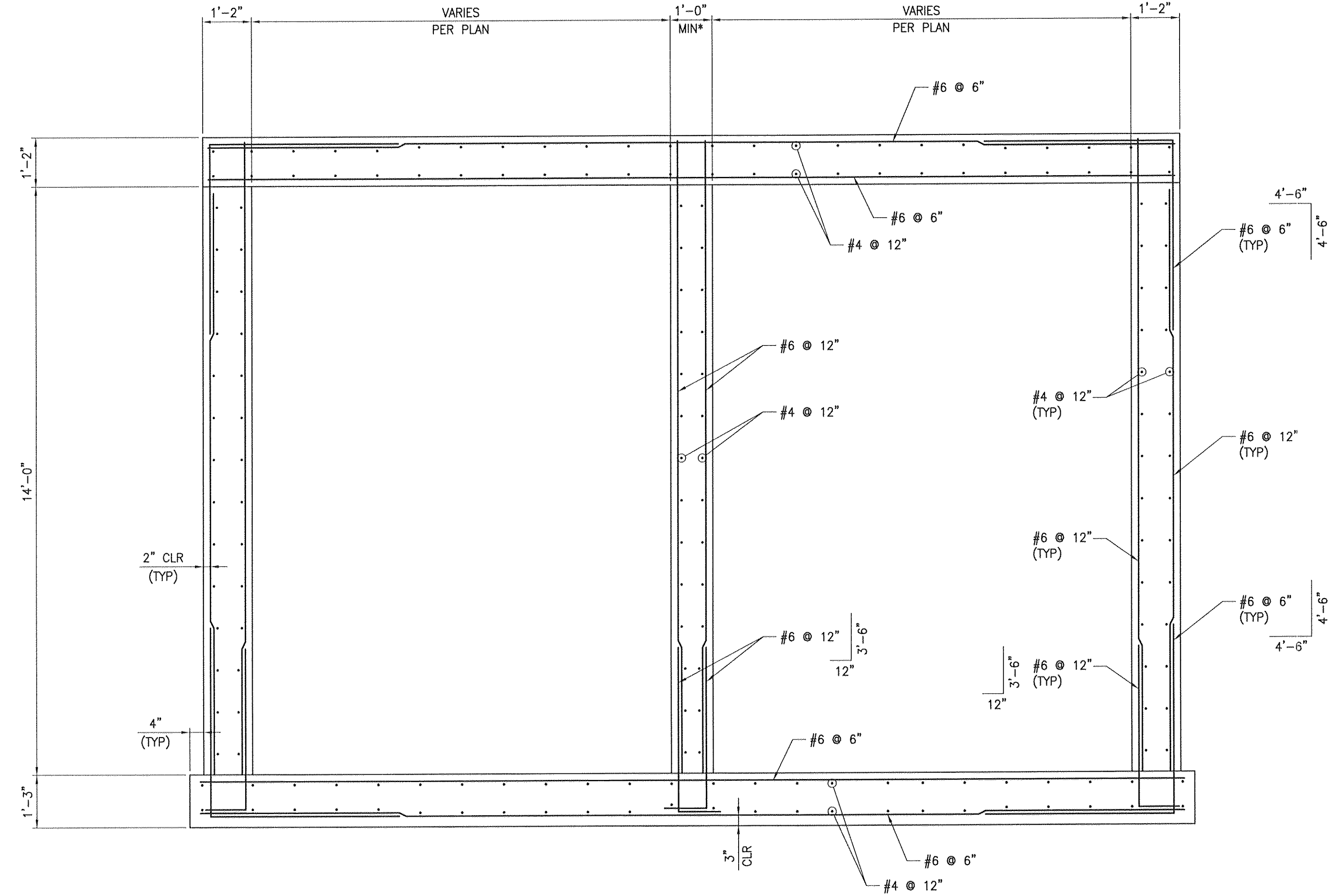
T.S. - TOP OF SLAB
T.W. - TOP OF WALL



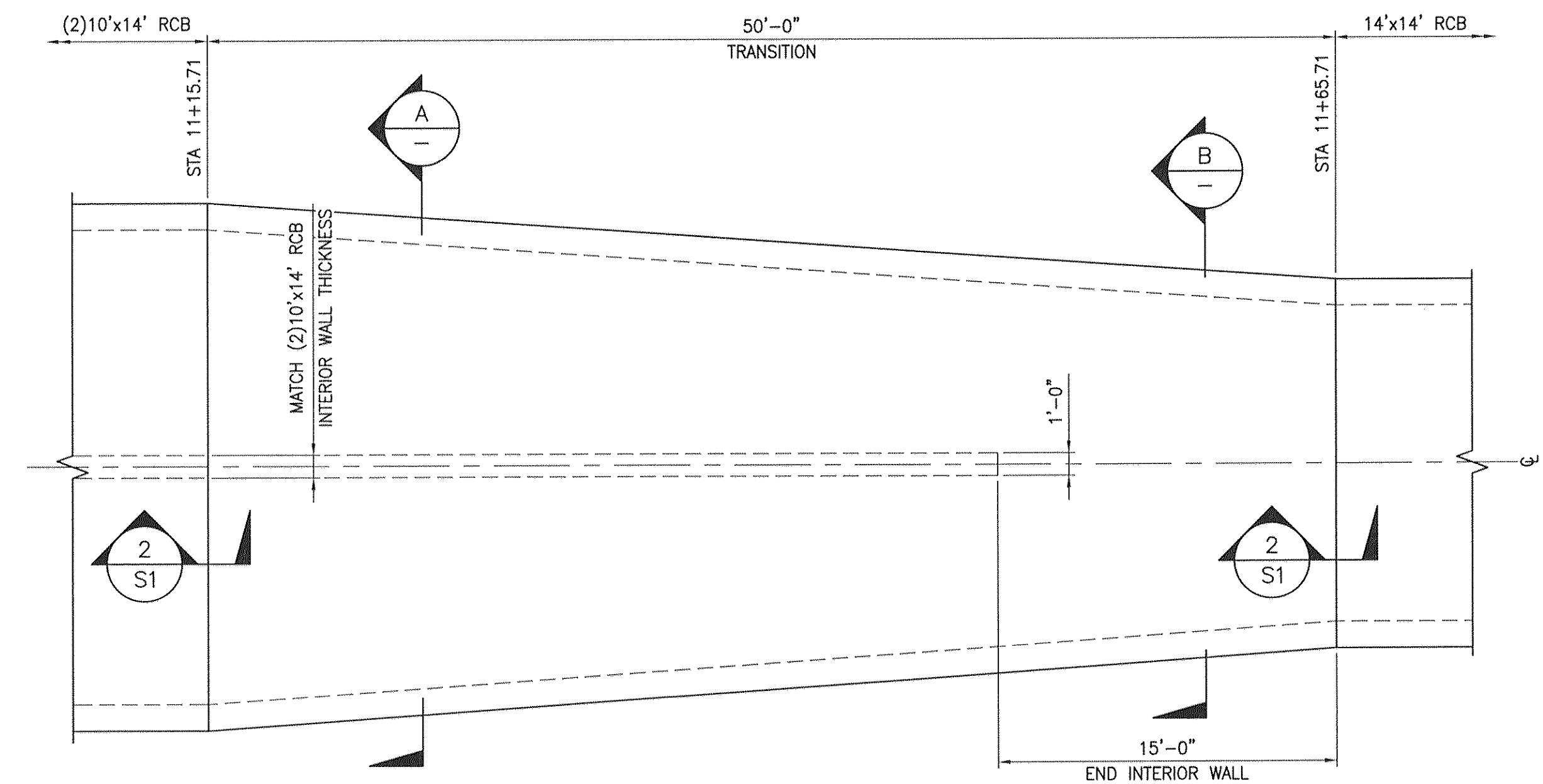




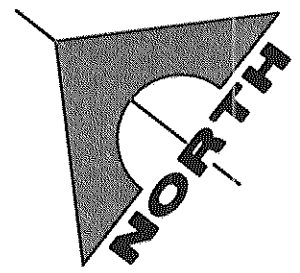
B SECTION
- SCALE: 1/2" = 1'-0"

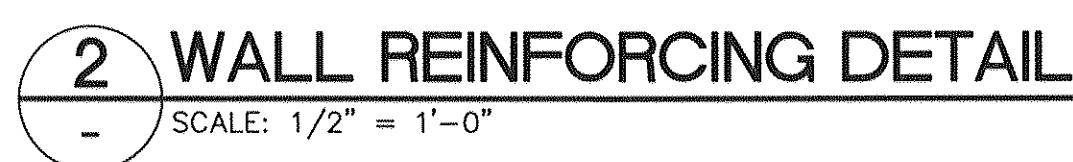


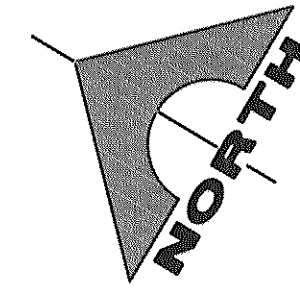
A SECTION
- SCALE: 3/16" = 1'-0"



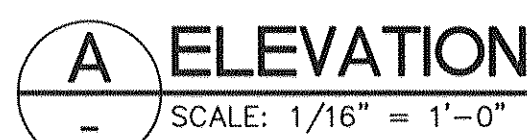
1 PLAN - (2)10'x14' RCB TO 14'x14' RCB TRANSITION
- SCALE: 3/16" = 1'-0"







1 ACCESS F
- SCALE: 1/16" = 1'-0"



B SECTION
SCALE: 1/2" = 1'-0"

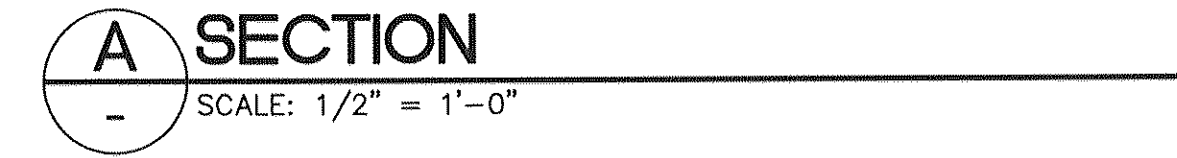
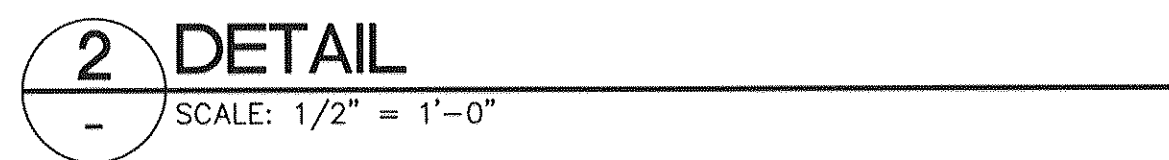


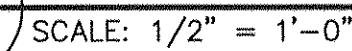
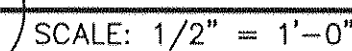
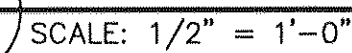
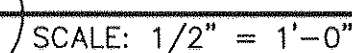
PROJECT NO.	764-204-013
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PLOT DATE:	03-17-16
PLOT TIME:	14:31:42

PULTE HOMES

**SUMMERLIN VILLAGE 26 - REVERENCE
OFF-SITE DRAINAGE IMPROVEMENTS**

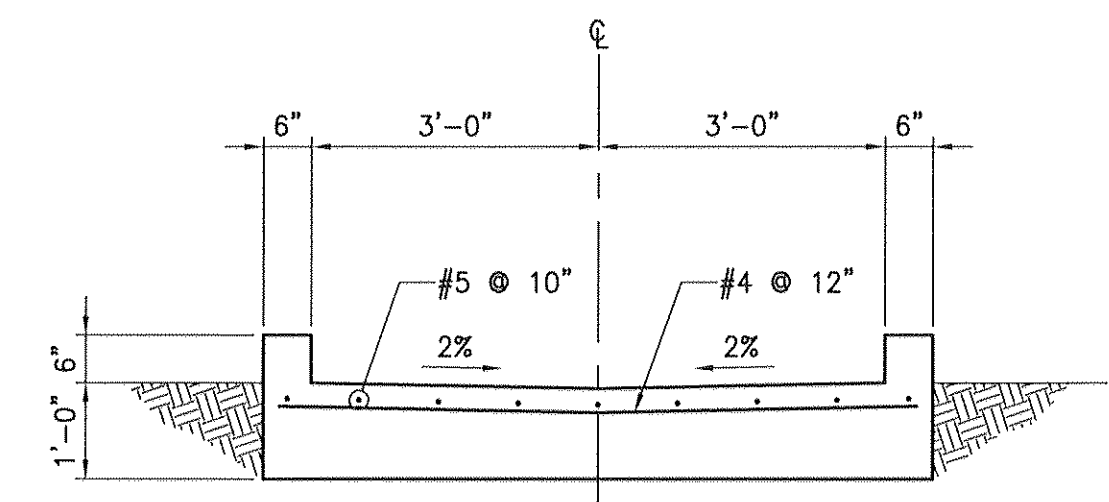
DEBRIS BASIN RETAINING WALLS





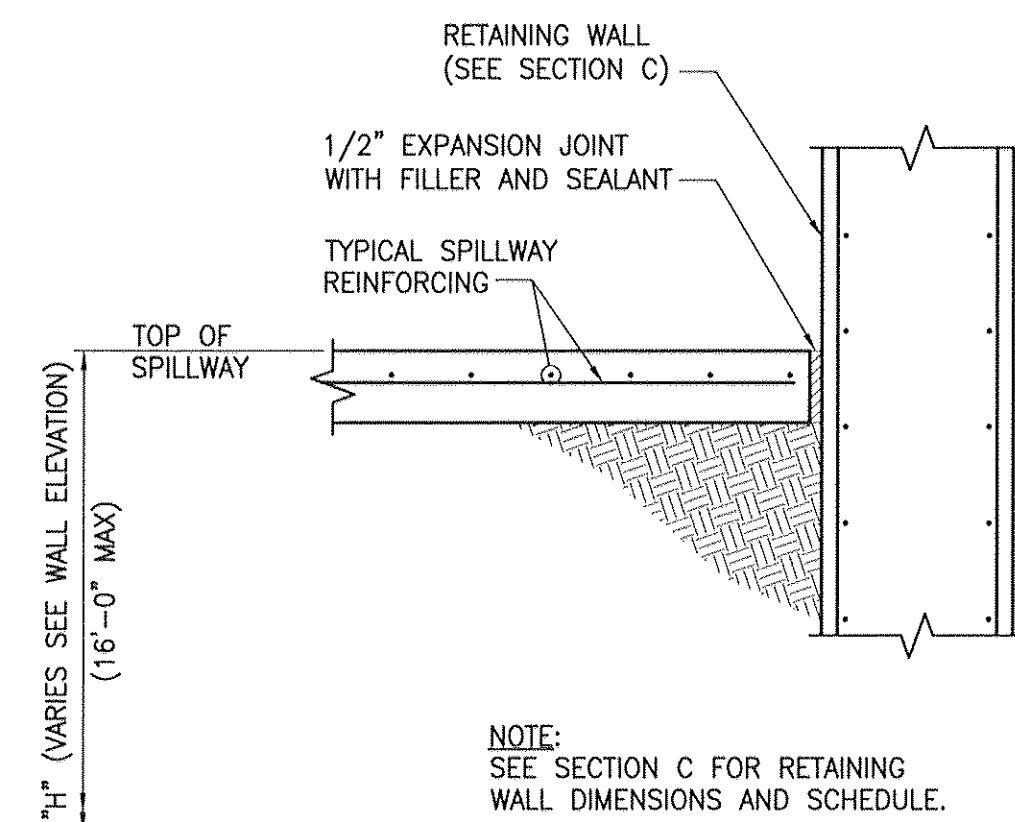
PULTE HOMES SUMMERLIN VILLAGE 26 - REVERENCE OFF-SITE DRAINAGE IMPROVEMENTS TYPICAL RCB SECTIONS	DRAWING S16 83 OF 87 SHTS
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- NOTES:**
1. PROVIDE 1/2" TRANSVERSE EXPANSION JOINTS WITH FILLER AND SEALANT AT MAXIMUM SPACING OF 60'-0".
 2. PROVIDE WEAKENED PLANE JOINTS AT MAXIMUM SPACING OF 10'-0".

SCALE: NTS



SCALE: NTS

DIMENSIONS						"X"	"Y"	"Z"
H	W	T	TW	TF	D			
≤ 8'-0"	9'-6"	2'-0"	1'-4"	1'-4"	2'-0"	#5 @ 6"	#7 @ 6"	#5 @ 6"
≤ 10'-0"	11'-0"	2'-0"	1'-6"	1'-6"	2'-0"	#6 @ 6"	#7 @ 6"	#6 @ 6"
≤ 12'-0"	12'-3"	2'-6"	1'-6"	1'-6"	2'-0"	#6 @ 6"	#8 @ 6"	#6 @ 6"
≤ 14'-0"	13'-6"	3'-6"	2'-0"	2'-0"	2'-0"	#6 @ 6"	#8 @ 6"	#6 @ 6"
≤ 16'-0"	15'-0"	4'-0"	2'-0"	2'-0"	2'-3"	#7 @ 6"	#9 @ 6"	#7 @ 6"
≤ 18'-0"	16'-0"	4'-6"	2'-0"	2'-0"	2'-6"	#7 @ 6"	#9 @ 6"	#7 @ 6"

SCALE: NTS

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PROJECT NO.	
764-204-013	
DESIGN: HN	
DRAWN:	
CHECK: WP	
PLOT DATE: 03-17-16	
PLOT TIME: 14:29:28	

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PULTE HOMES

SUMMERLIN VILLAGE 26 - REVERENCE OFFSITE DRAINAGE IMPROVEMENTS

MISCELLANEOUS DETAILS

DRAWING

S19

86 OF 87 SHTS



