

# CIP 500 C: SANTA FE RIVER FLOOD DAMAGE REPAIRS

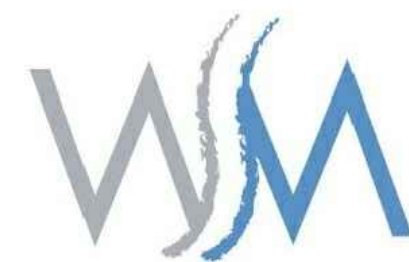
RICARDO ROAD TRAIL BRIDGE TO CALLE DON JOSE STORM DRAIN OUTFALL



SITES  
SOUTHWEST

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ALBUQUERQUE, NM 87102  
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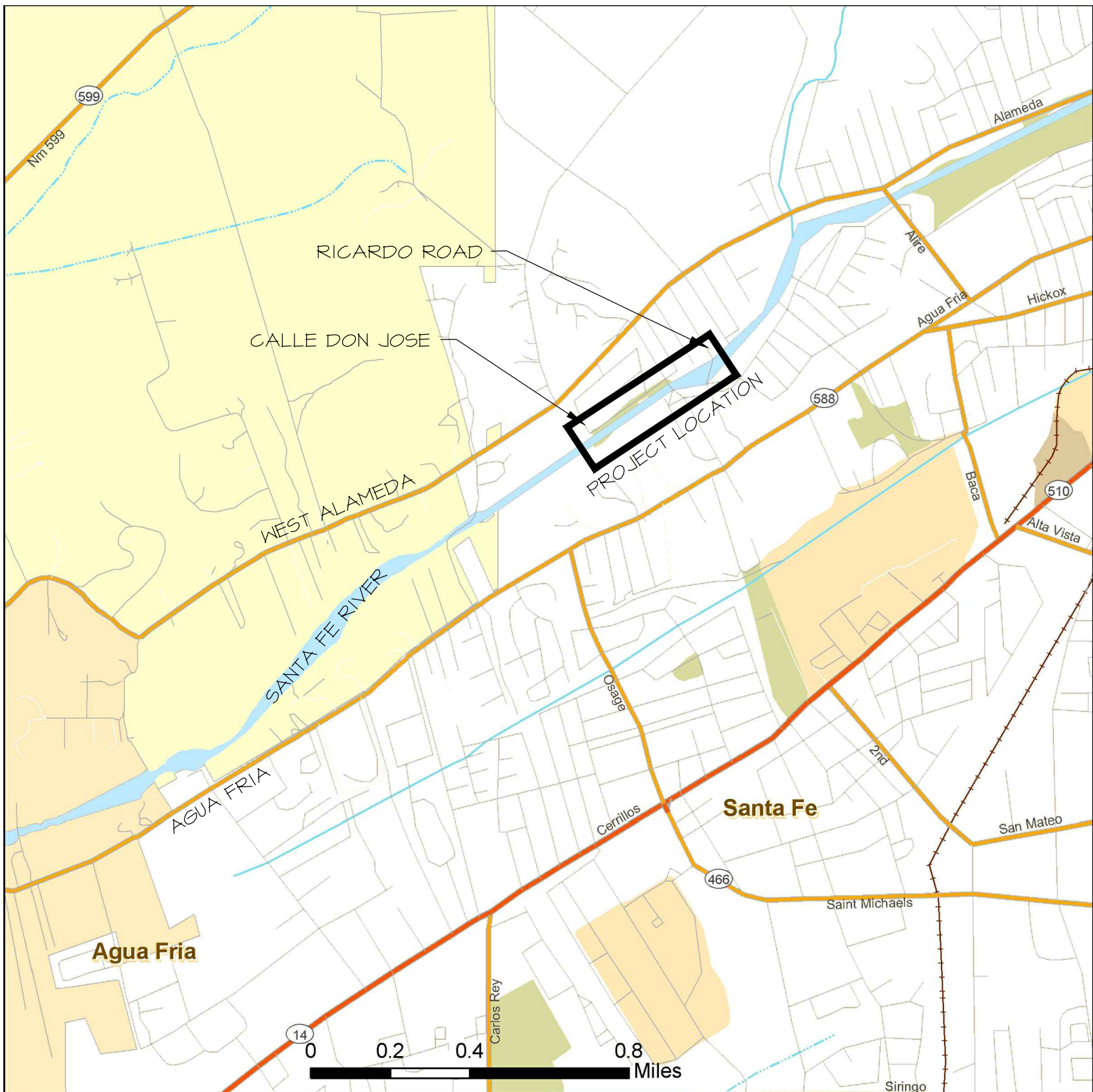
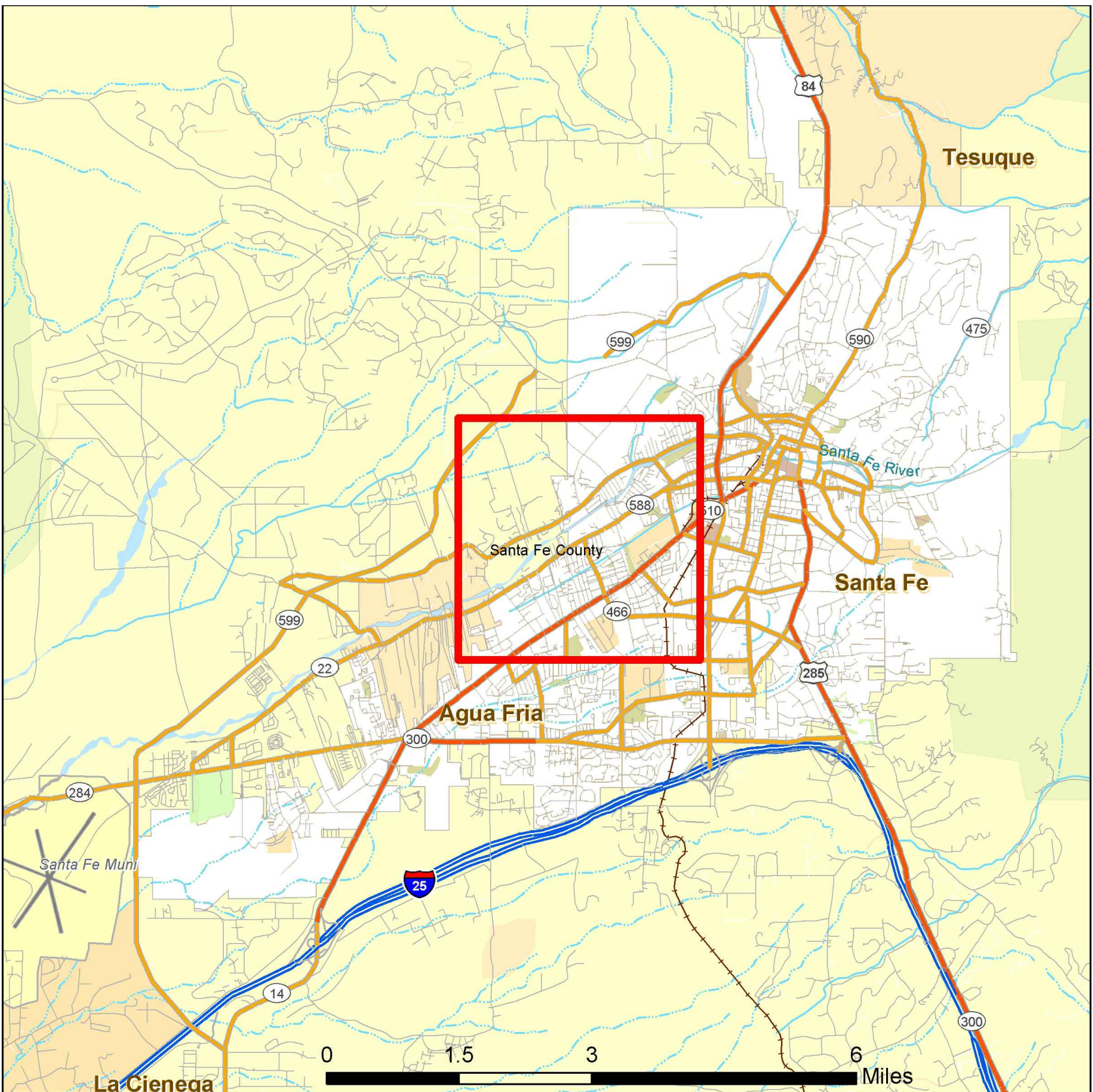
CONSULTANTS



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ENGINEERS

PROJECT

CIP 500 C:  
SANTA FE RIVER  
FLOOD DAMAGE REPAIRS



VICINITY MAPS

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CITY OF SANTA FE, NM

APPROVED BY CITY OF SANTA FE  
Approved as to general scope. No design reviewed

PUBLIC WORKS DEPARTMENT  
DIRECTOR  
7/8/19  
DATE

REVIEWED BY CITY OF SANTA FE  
MAYOR'S COMMITTEE ON DISABILITY

ADA COORDINATOR  
7/10/19  
DATE

APPROVED BY CITY OF SANTA FE

ROADWAY & TRAILS  
ENGINEERING DIVISION DIRECTOR  
7/10/19  
DATE

REVIEWED BY CITY OF SANTA FE  
HISTORIC PRESERVATION DIVISION

HISTORIC PRESERVATION DIVISION  
DATE

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	JUNE 28, 2019	ISSUE DATE
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		CHK'D BY
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SHEET TITLE

COVER

C1

SHEET 1

OF 17



GOVERNING SPECIFICATIONS

- 1) THE CONTRACTOR SHALL ABIDE BY ALL LOCAL, STATE, AND FEDERAL LAWS, REGULATIONS, AND RULES WHICH APPLY TO THIS PLAN SET. THIS SHALL INCLUDE ALL ADA REGULATIONS.
- 2) SPECIFICATIONS FOR THIS PROJECT WILL BE THE NEW MEXICO DEPARTMENT OF TRANSPORTATIONS "STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, 2014 EDITION." REFERENCES TO "THE CITY" SHALL IMPLY THE CITY OF SANTA FE FOR THIS PROJECT. IN THE EVENT OF A CONFLICT AMONG CODES, THE NMDOT STANDARDS AND SPECS SHALL GOVERN.

MONUMENTATION INFORMATION

- 1) A SUPPLEMENTAL HYDROGRAPHIC SURVEY WAS PERFORMED ON MARCH 26, 2019 BY WOLF ENGINEERING TO COLLECT DATA REFLECTING THE POST-FLOOD CHANGES TO THE RIVER CHANNEL. A TRIMBLE R-8 RTK GPS WITH TSC2 DATA COLLECTOR WAS USED TO COLLECT HYDROGRAPHIC DATA. SEVERAL TEMPORARY BENCHMARKS WERE LOCATED AS WELL AS EXISTING TOP OF SEWER MANHOLE ELEVATIONS IN THE PROJECT VICINITY. AN FUS-RS SOLUTION WAS PERFORMED FOR THE BASED STATION (TBM). THE PROJECT COORDINATES ARE REFERENCED TO NM CENTRAL ZONE NAD 83 (FT) AND NAVD 1988 (FT) (GEOID 12A).
- 2) PROTECTION OF SURVEY MONUMENTS; THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT HORIZONTAL AND VERTICAL CONTROL SURVEY MONUMENTS (MARK) FROM DAMAGE PRIOR TO INITIATING CONSTRUCTION. AN INVENTORY OF THE EXISTING MONUMENTS WILL BE TAKEN BY THE PROJECT MANAGER AND THE CONTRACTOR WITH ACKNOWLEDGEMENTS PRIOR TO START OF CONSTRUCTION. IF, DURING THE COURSE OF CONSTRUCTION OPERATIONS, THE CONTRACTOR DISTURBS OR DESTROYS A MARK, THE CONTRACTOR SHALL ESTABLISH A NEW MARK IN COMPLIANCE WITH THE STANDARDS AND PROCEDURES SET FORTH IN THE "GEODETIC MARK PRESERVATION GUIDEBOOK," NATIONAL GEODETIC SURVEY, MARCH 1990, CONTACT # NGS MARK PRESERVATION CENTER-NOAA, TELEPHONE 505-768-3606. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE COMPLETION OF THE PROJECT AND NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE THEREFOR.

TRAFFIC CONTROL

- 1) THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING APPROVAL FOR TRAFFIC CONTROL PROCEDURES FROM CITY OF SANTA FE PUBLIC WORKS.
- 2) THE CONTRACTOR SHALL BE THE RESPONSIBLE PARTY FOR THE IMPLEMENTATION AND MAINTENANCE OF ALL TRAFFIC CONTROL PROCEDURES AND MATERIALS. THE CONTRACTOR SHALL HAVE PERSONNEL AVAILABLE 24 HOURS PER DAY, SEVEN (7) DAYS PER WEEK TO INSPECT AND MAINTAIN TRAFFIC CONTROL DEVICES AS DIRECTED BY THE PROJECT MANAGER.
- 3) THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN A TRAFFIC CONTROL DIARY, WHICH SHALL BE AVAILABLE FOR REVIEW BY THE CITY PROJECT MANAGER. COST OF THIS WORK IS TO BE INCLUDED IN THE UNIT BID PRICE FOR CONSTRUCTION TRAFFIC CONTROL.
- 4) THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE SAFETY OF PEDESTRIAN AND VEHICULAR TRAFFIC IN THE CONSTRUCTION ZONE BY ENSURING THAT ALL NECESSARY SAFETY PRECAUTIONS ARE TAKEN, AS REQUIRED BY FEDERAL, STATE, AND LOCAL AUTHORITIES, INCLUDING, BUT NOT LIMITED TO: GUARD FENCES, BARRICADES, LIGHTS, AND WARNING SIGNS.
- 5) PUBLIC ACCESS TO LOCAL BUSINESSES, RESIDENCES AND ROADWAYS; THE CONTRACTOR SHALL PROVIDE INGRESS AND EGRESS TO LOCAL BUSINESSES AND RESIDENCES AND ALL LOCAL ROADWAYS FOR THE DURATION OF THE PROJECT. THE CONTRACTOR SHALL ADVISE OF AND SCHEDULE ACCESS CLOSURES AT LEAST 24 HOURS IN ADVANCE WITH PROPERTY OWNERS AND THE PROJECT MANAGER.
- 6) THE CONTRACTOR SHALL ADHERE TO ALL REQUIREMENTS LISTED IN THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- 7) ALL DEVICES SHALL ADHERE TO THE REQUIREMENTS OF SECTION 702 - CONSTRUCTION TRAFFIC CONTROL DEVICES IN THE 2014 EDITION OF THE NMDOT STANDARD SPECIFICATIONS BOOK.

8) ANY PROPOSED CHANGES TO THE CONSTRUCTION SEQUENCE AND/OR TRAFFIC CONTROL PLAN MUST BE SUBMITTED BY THE CONTRACTOR TO THE PROJECT MANAGER FOR APPROVAL. NO PAYMENT WILL BE MADE FOR ANY ADDITIONAL COST RESULTING FROM CHANGES TO THE CONSTRUCTION SEQUENCE OR TRAFFIC CONTROL PLAN. THE CONTRACTOR SHALL BE REQUIRED TO SUBMIT A LETTER OF JUSTIFICATION FOR THE CHANGES WITH THE FOLLOWING ITEMS INCLUDED:

- A REVISED TRAFFIC CONTROL PLAN INCLUDING A SUMMARY OF QUANTITIES AND A COST ESTIMATE.
- THE REVISED TRAFFIC CONTROL PLAN SHALL BE DRAFTED ON 11X17 PAPER AND SEALED BY A LICENSED ENGINEER. THE SUBMITTAL PAPER SHALL MEET CURRENT DRAFTING STANDARDS.
- CHANGES TO THE TRAFFIC CONTROL PLAN MUST BE APPROVED BY THE CITY AT LEAST ONE (1) WEEK IN ADVANCE OF THE IMPLEMENTING CHANGES TO THE FILE.

GENERAL CONSTRUCTION

- 1) THE CONTRACTOR SHALL PROVIDE A LIST OF CONTACT PERSONNEL RESPONSIBLE FOR SITE CONSTRUCTION INCLUDING POSITION, TELEPHONE NUMBERS, AND AT LEAST ONE EMERGENCY TELEPHONE NUMBER ACTIVE ON A 24-HOUR BASIS.
- 2) ANY TEMPORARY ACCESS ROUTES FOR PEDESTRIANS AND BICYCLISTS SHALL BE COMPLIANT WITH A.D.A. REQUIREMENTS.
- 3) THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING A YARD SITE SUITABLE TO STORE ALL EQUIPMENT AND MATERIALS TO BE USED ON THIS PROJECT. THE CONTRACTOR SHALL NOT STORE EQUIPMENT OR MATERIAL WITHIN THE PUBLIC RIGHT-OF-WAY WITHOUT PERMISSION FROM THE PROJECT MANAGER. ALL COSTS ASSOCIATED WITH THIS YARD, INCLUDING TAXES, SHALL BE BORNE BY THE CONTRACTOR. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE COMPLETION OF THE PROJECT AND NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE.
- 4) AS-BUILT PLANS; THE CONTRACTOR SHALL MAINTAIN AN UP-TO-DATE SET OF AS-BUILT PLANS FOR THE PROJECT. THESE PLANS SHALL BE KEPT CURRENT WITHIN ONE WEEK AT ALL TIMES AND SHALL BE SUBJECT TO REVIEW BY THE PROJECT MANAGER THROUGHOUT THE PROJECT. THE FINAL AS-BUILT PLANS SHALL BE SUBMITTED TO THE PROJECT MANAGER AT THE TIME OF FINAL WALK-THROUGH, PRIOR TO FINAL PAYMENT.
- 5) THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING THE NECESSARY ARRANGEMENT FOR OBTAINING THE WATER NECESSARY FOR THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHOULD CONTACT THE CITY'S WASTEWATER DIVISION AT 455-4650 FOR MORE INFORMATION AND PRICING REGARDING THE USE, AND PRICING OF THE FIRE HYDRANT WATER METERING, IF AVAILABLE. ANY ASSOCIATED COSTS WILL BE INCIDENTAL TO COMPLETION OF THE PROJECT AND NO SEPARATE PAYMENT WILL BE MADE THEREFOR.
- 6) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REMOVALS REQUIRED TO COMPLETE THE PROJECT. ADDITIONAL REMOVALS NOT SHOWN ON THE PLANS MAY BE DESIGNATED BY THE PROJECT MANAGER. ALL REMOVALS, UNLESS OTHERWISE INDICATED, WILL BE INCIDENTAL TO CLEARING AND GRUBBING.
- 7) ANY SALVAGEABLE MATERIALS REMOVED FROM THIS PROJECT SHALL BE HAULED AND STOCKPILED AT A LOCAL LOCATION DETERMINED BY THE OWNER'S REPRESENTATIVE. HAUL OF SUCH MATERIALS SHALL BE INCIDENTAL TO BID ITEM 201000, CLEARING AND GRUBBING.
- 8) THE CONTRACTOR WILL BE REQUIRED TO CONFINED HIS WORK WITHIN THE CONSTRUCTION LIMITS AND/OR NEW RIGHT-OF-WAY LIMITS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROHIBIT VEHICLES AND EQUIPMENT FROM DRIVING UPON, ACROSS, OR TURNING ON PRIVATE PROPERTY ADJACENT TO PROJECT LIMITS.
- 9) OVERNIGHT PARKING OF VEHICLES OR EQUIPMENT WITHIN THE RIVER CHANNEL IS PROHIBITED.
- 10) THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED BY HIM TO ANY PUBLIC OR PRIVATE PROPERTY, INCLUDING EXISTING WALLS, FENCES, SIDEWALKS, TRAIL SURFACES, SEWER OR WATER LINES, VALVE BOXES, MANHOLES, CURB AND GUTTER, ETC., DURING CONSTRUCTION AND SHALL REPAIR OR REPLACE SAME AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR IS RESPONSIBLE FOR DOCUMENTATION OF ANY EXISTING DAMAGE PRIOR TO START OF CONSTRUCTION.
- 11) ALL DIMENSIONS ON PLANS ARE APPROXIMATE AND SUBJECT TO FIELD VERIFICATION AND/OR MODIFICATIONS IF NECESSARY TO FIT EXISTING CONDITIONS. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ALL OTHER PERTINENT INFORMATION THAT MAY BE REQUIRED TO COMPLETE THE WORK AND COORDINATE ANY REQUIRED CHANGES WITH THE PROJECT ENGINEER.

- 12) CONTRACTOR SHALL MAINTAIN A GRAFFITI-FREE WORK SITE. CONTRACTOR SHALL REMOVE ANY GRAFFITI WITHIN 24 HOURS FROM ALL CONSTRUCTION MATERIALS, EQUIPMENT AND SIGNAGE, WHETHER PERMANENT OR TEMPORARY.
- 13) ALL QUANTITIES SCHEDULED IN THE PLANS ARE FOR ESTIMATING PURPOSES ONLY. PAYMENT AND MEASUREMENT OF QUANTITIES SHALL BE DONE IN ACCORDANCE WITH SECTION 109 - MEASUREMENT AND PAYMENT, OF THE NMDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, 2014 EDITION.
- 14) THE CONTRACTOR SHALL SUBMIT TO THE PROJECT MANAGER A CRITICAL PATH PROJECT SCHEDULE, INCLUDING WEEKLY CONSTRUCTION MEETINGS WITH PRE-SET DATES, TWO (2) WEEKS PRIOR TO THE PRE-CONSTRUCTION CONFERENCE. THE SCHEDULE SHALL BE UPDATED MONTHLY OR AS REQUIRED BY THE PROJECT MANAGER. THE WORK SHALL BE CONSIDERED INCIDENTAL TO THE COMPLETION OF THE PROJECT AND NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE THEREFOR.
- 15) CITY OF SANTA FE NOISE ORDINANCE SFCC § 10-2.4B.(5)(A) PROHIBITS OPERATION OF EQUIPMENT USED IN CONSTRUCTION WORK ON STREETS IN RESIDENTIAL OR COMMERCIAL ZONED AREAS BETWEEN THE HOURS OF 9:00 P.M. AND 7:00 A.M. THE FOLLOWING DAY. THOSE REQUIREMENTS WILL ALSO BE ENFORCED FOR THIS PROJECT AREA. IN ACCORDANCE WITH SFCC § 10-2.9 PERMITS, THE CONTRACTOR MAY REQUEST APPROVAL OF A PERMIT TO BE EXEMPT FROM THE AFOREMENTIONED NOISE ORDINANCE FOR THE DURATION OF PROJECT CONSTRUCTION.
- 16) THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING TREES AND OTHER VEGETATION TO REMAIN, PER THE REQUIREMENTS IDENTIFIED IN THESE PLANS. SEE PLAN SHEETS FOR ADDITIONAL INFORMATION.

EARTHWORK

- 1) THE EARTHWORK QUANTITIES ARE BASED ON FINAL VOLUMES COMPACTED IN PLACE. ON-SITE EXCAVATION AND BACKFILL QUANTITIES ARE BASED ON AN ASSUMED SHRINKAGE FACTOR OF 20%.
- 2) UNLESS OTHERWISE STATED WITHIN THIS PLAN SET, ALL SIDESLOPES SHALL BE 3H:1V MAXIMUM, KEEPING SLOPES FLATTER WHEREVER POSSIBLE AS DIRECTED BY THE PROJECT MANAGER. SLOPES SHALL TRANSITION SMOOTHLY TO EXISTING GRADES AND ADJACENT STRUCTURES IN ALL CASES. THE CONTRACTOR SHALL WARP SLOPES WHERE NECESSARY TO STAY WITHIN THE RIGHT-OF-WAY OR CONSTRUCTION LIMITS, OR TO MEET EXISTING STRUCTURES.
- 3) MATERIAL PITS; NO MATERIAL PITS HAVE BEEN DESIGNATED FOR THIS PROJECT. THE CONTRACTOR MAY OBTAIN SPECIFICATION BORROW OR SURFACING MATERIAL FROM ANY ACCEPTABLE SOURCE. ALL MATERIAL PIT ACTION SHALL BE GOVERNED BY SECTION 106 OF THE NMDOT STANDARD SPECIFICATIONS.
- 4) ALL EXCAVATION, TRENCHING, AND SHORING ACTIVITIES MUST BE CARRIED OUT IN ACCORDANCE WITH OSHA 29, CFR 1926.650, SUBPART P.
- 5) THE CONTRACTOR SHALL BE RESTRICTED TO THE USE OF A 35-TON NON-VIBRATING ROLLER MAXIMUM TO OBTAIN THE REQUIRED COMPACTION FOR EMBANKMENT AND SUBGRADE ADJACENT TO VERTICAL BANKS, WHERE THE USE OF HEAVIER OR VIBRATORY EQUIPMENT COULD DAMAGE UNDERGROUND UTILITIES OR OTHER STRUCTURES, OR CAUSE SLOPE FAILURE.
- 6) CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED OR DEPOSITED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED AWAY.

SUMMARY OF QUANTITIES

			BASE BID		ADDITIVE ALTERNATIVE No. 1		ADDITIVE ALTERNATIVE No. 2		ADDITIVE ALTERNATIVE No. 3		ADDITIVE ALTERNATIVE No. 4	
BID AND MATERIAL QUANTITIES			AREAS 1-4	AREA 12	AREA 8	AREA 11	AREA 9	AREA 10	AREA 5	ALEJANDRO CHANNEL REHABILITATION	SOUTH BANK PROTECTION AT LA JOYA ST.	LA JOYA CHANNEL REHABILITATION
SPEC. NO.*	DESCRIPTION	UNITS	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY
621	Mobilization, demobilization	LS	1	0	0	0	0	0	0	0	0	0
801	Construction staking by Contractor	LS	1	1	1	0	1	1	1	1	1	1
603	Temporary erosion and sediment control	LS	1	1	1	0	1	1	1	1	1	1
203	Earthwork (excavation & compacted backfill)	CY	350	600	0	20	145	75	105	155	244	137
203	Remove / import excess earthfill	CY	0	210	450	0	110	60	70	1,188	845	195
601	Demolition and removal of existing structure	LS	0	0	0	0	0	0	0	1	0	1
602	Salvage and install structure rock (54 cu. ft. min.)	TN	170	110	105	40	0	0	0	0	0	0
602	Furnish and install structure rock (54 cu. Ft. min.)	TN	165	10	35	0	0	0	0	0	1,230	0
602	Furnish and install grouted structure rock (18-27 cu. ft.)	TN	180	385	51	0	0	0	0	0	0	0
602	Salvage and install structure rock (18-27 cu. ft.)	TN	0	87	0	0	0	0	0	0	0	0
602	Furnish and install structure rock (18-27 cu. ft.)	TN	0	93	0	0	150	153	85	445	0	340
602	Furnish and install Class C Riprap (hand placed)	CY	0	14	0	0	7	8	9	0	0	11
303	Furnish and install graded gravel filter	CY	0	102	0	36	81	54	47	50	170	15
570/206	Furnish and install 3.5 ft. diameter CMP	LF	0	0	0	0	0	0	0	20	0	20
632/664	Revegetation and landscape planting	LS	1	1	1	0	1	1	1	1	1	1
702	Traffic control	LS	1	1	0	0	0	0	0	0	1	1

SEPARATE PLAN SET

- 7) FIELD VERIFICATION; THE CONTRACTOR SHALL FIELD VERIFY THE GRADES AND ELEVATIONS BEFORE PROCEEDING WITH THE WORK. IF THERE IS A DISCREPANCY BETWEEN INDICATED EXISTING ELEVATIONS OR PROPOSED GRADE ELEVATIONS AND THE ACTUAL GRADE ELEVATIONS DETERMINED ON SITE, THE CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER TO DETERMINE WHAT CORRECTIONS NEED TO BE APPLIED. THIS WORK WILL BE PAID FOR UNDER THE CONTRACT PRICE FOR "CONSTRUCTION STAKING BY THE CONTRACTOR" AND NO ADDITIONAL MEASUREMENT OR PAYMENT WILL BE MADE THEREFORE.
- 8) CONSTRUCTED GRADES AND STRUCTURES SHALL BE WITHIN +/- 0.1" (1-1/4") OF PLAN ELEVATIONS.
- 9) GRADING SHALL BE COMPLETED UNDER THE AUTHORITY OF A BUILDING PERMIT, THE APPLICATION FOR WHICH SHALL SHOW THE TYPE OF WORK AS "OTHER" ALONG WITH THE NOTATION OF "GRADING, LANDSCAPING, AND INFRASTRUCTURE" SHOWN THEREON. CALL 505-455-6448 FOR PERMIT INFORMATION.

UTILITIES

- 1) \*\* WARNING \*\* - EXISTING UTILITY LINE LOCATIONS ARE SHOWN IN APPROXIMATE MANNER ONLY, AND OTHER SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. THE LOCATION OF ANY SUCH EXISTING LINES IS BASED UPON INFORMATION PROVIDED BY THE UTILITY COMPANY, THE OWNER, OR BY OTHERS, AND THE INFORMATION MAY BE INCOMPLETE OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY, AND PRESERVE ANY AND ALL EXISTING UTILITIES. THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES, IN PLANNING AND CONDUCTING EXCAVATION, WHETHER BY CALLING OR NOTIFYING THE UTILITIES, COMPLYING WITH "BLUE STAKES" PROCEDURES, OR OTHERWISE.
- 2) THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES WHEN WORKING NEAR THEIR SYSTEMS. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CALL NEW MEXICO ONE CALL SYSTEM AT 1-800-321-2537, 48 HOURS PRIOR TO EXCAVATING, REGARDING LOCATION OF EXISTING UTILITIES. THE CONTRACTOR MAY BE REQUIRED TO RESCHEDULE ITS ACTIVITIES TO ALLOW UTILITY CREWS TO PERFORM THEIR REQUIRED WORK.

UTILITY CONTACTS		
UTILITY	ENTITY	TELEPHONE
WATER	SANGRE DE CRISTO WATER CO. CITY OF SANTA FE	955-4265 455-4333 (EMERGENCY)
SEWER	CITY OF SANTA FE PUBLIC UTILITIES	955-6666
GAS	NEW MEXICO GAS	473-7228 888-664-2726 (EMERGENCY)
ELECTRIC	PUBLIC SERVICE COMPANY OF NEW MEXICO (PNM)	473-3209 450-1947 (EMERGENCY)
CITY OF SANTA FE STREETS AND DRAINAGE	JAVIER MARTINEZ	505-955-2402
STORMWATER INFRASTRUCTURE	DAVID PIKE	955-2134
RIVER & WATERSHED MANAGER	MELISSA McDONALD	955-6840



William J. Miller Engineers, Inc.  
1511 Third St.,  
Santa Fe, NM 87505

GENERAL NOTES

City of Santa Fe  
SANTA FE RIVER  
FLOOD DAMAGE REPAIR  
Ricardo Bridge to Don Jose Storm Drain Outfall





SUPPLEMENTAL TEMPORARY BENCHMARKS			
Description	Elevation	Northing	Easting
TBM-1	6775.17	1702222.93	1721467.84
TBM-3	6771.49	1702037.77	1721569.38
TBM-2	6779.74	1702504.89	1722189.02
TBM-4	6768.35	1702190.75	1721645.14
TBM-5	6773.16	1702061.67	1721717.17



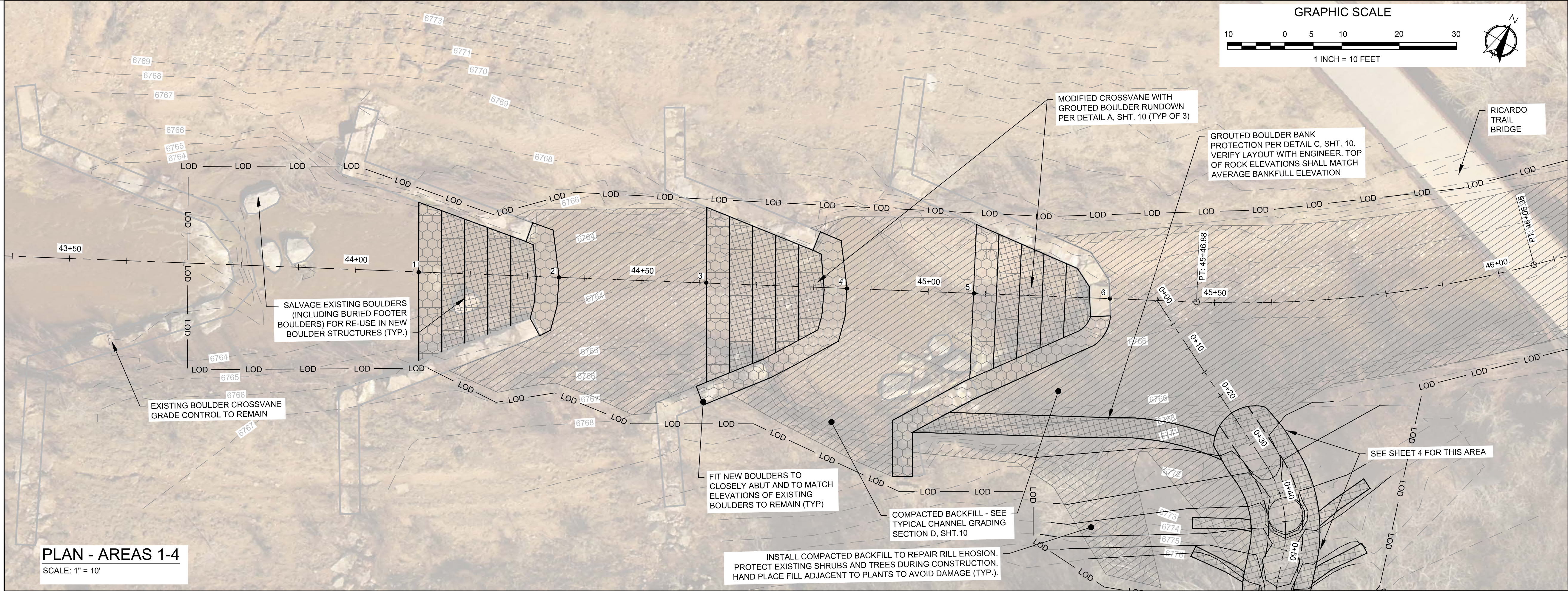
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1511 Third St.,  
Santa Fe, NM 87505

OVERALL PLAN KEY MAP

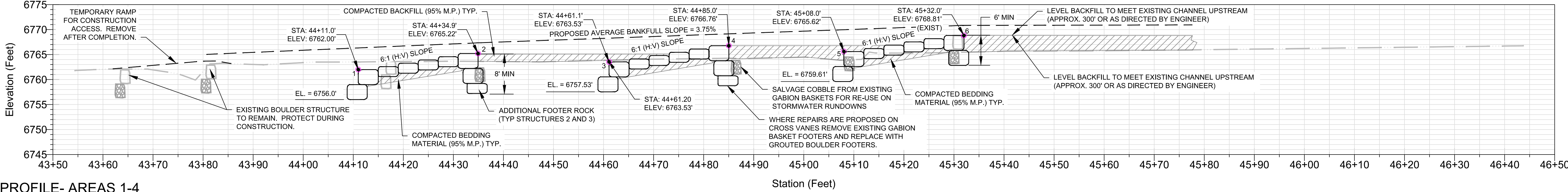
City of Santa Fe  
SANTA FE RIVER  
FLOOD DAMAGE REPAIR  
RICARDO BRIDGE TO DON JOSE OUTFALL

Designed By: JMC/RMO	Checked By: WJM	Project Number: 19060	Sheet: 3 of 17
Drawn By: AMR/RMO	Date: June 28, 2019		

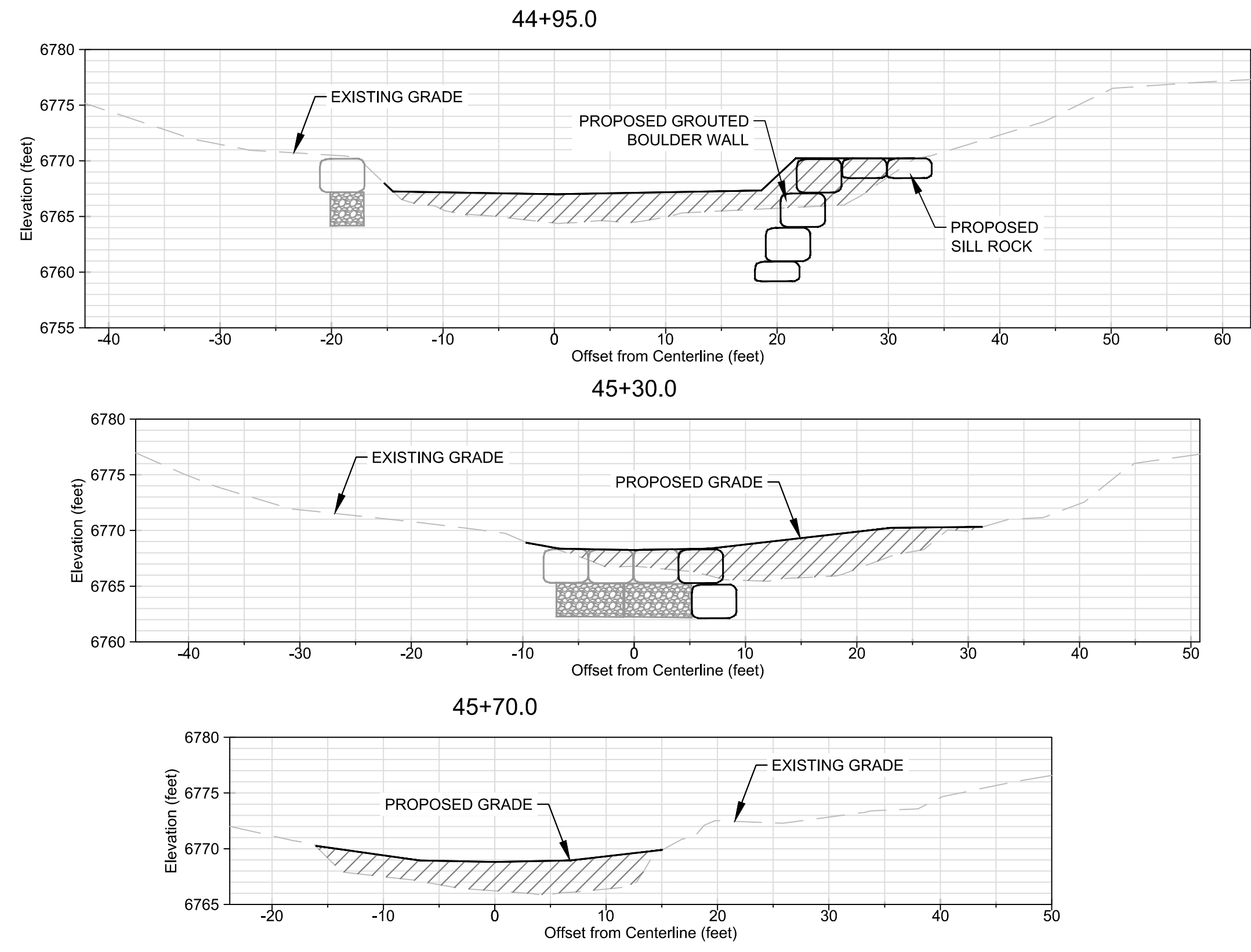
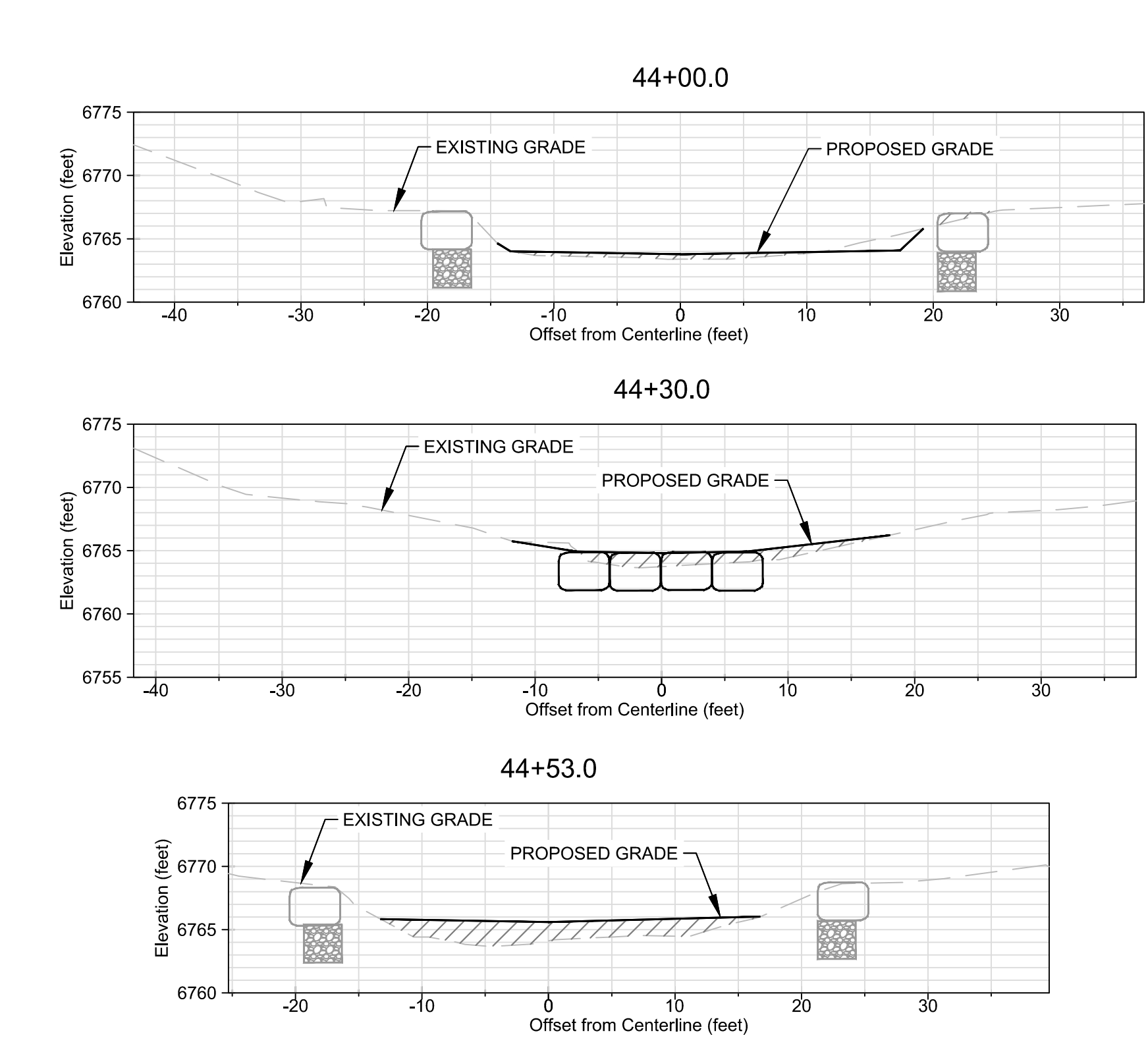




- DEMOLITION NOTES
1. REMOVE REMAINING BOULDERS FROM EXISTING CROSSVANE AND BANK PROTECTION VANES TO LIMITS SHOWN, INCLUDING BURIED FOOTING BOULDERS (NOT SHOWN).
  2. STORE/STOCKPILE BOULDERS IN CENTRAL LOCATION OUT OF MAIN CHANNEL, AS APPROVED BY OWNER'S REPRESENTATIVE.
  3. REMOVE AND DISPOSE OF ANY REMAINING GABION BASKETS WHERE NEW FOOTER BOULDERS ARE SPECIFIED IN PLANS. SALVAGE COBBLE FILL FOR RE-USE ON PROJECT.
  4. USE CARE DURING REMOVALS TO AVOID DAMAGE TO EXISTING VEGETATION, AND EXISTING GABION BASKET FOOTERS OR BOULDERS TO REMAIN IN PLACE.
  5. PROTECT EXISTING CONCRETE TRAIL FROM DAMAGE DURING CONSTRUCTION. TRAIL SHALL REMAIN OPEN DURING CONSTRUCTION.



PROFILE- AREAS 1-4  
SCALE: 1" = 10' (H & V)



SECTIONS- AREAS 1-4  
SCALE: 1" = 10' (H & V)



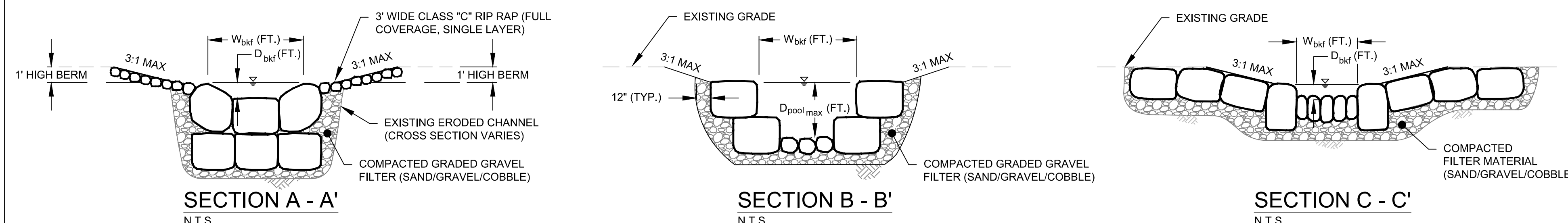
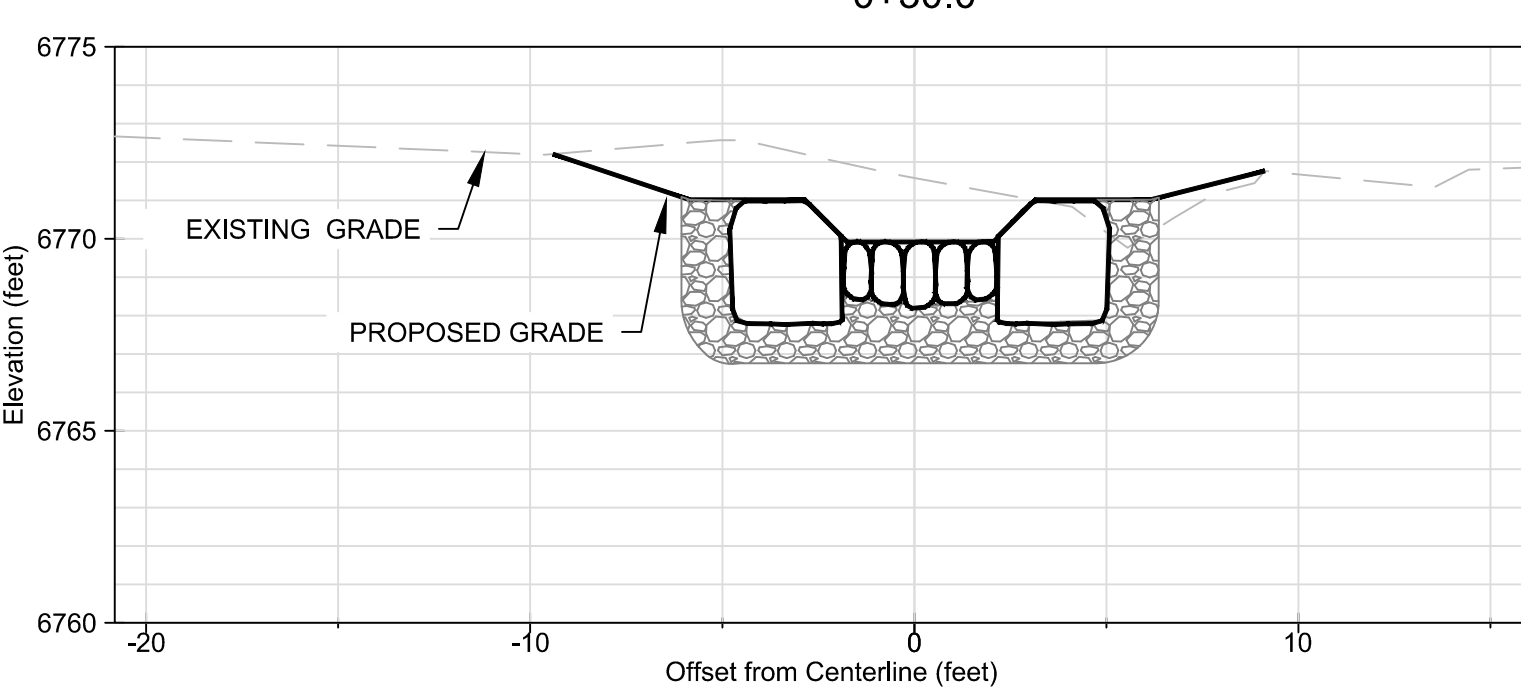
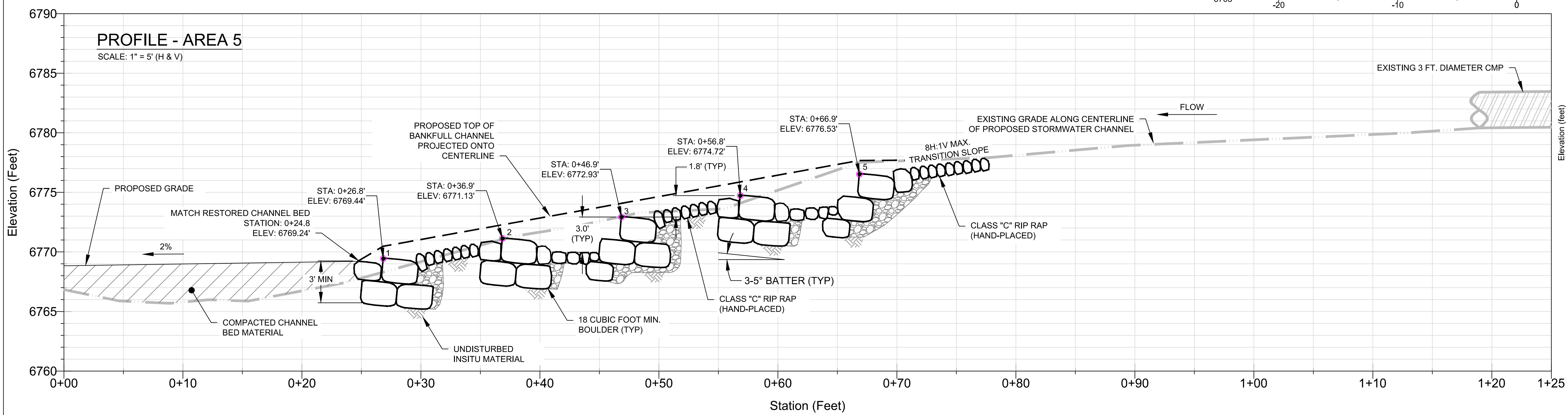
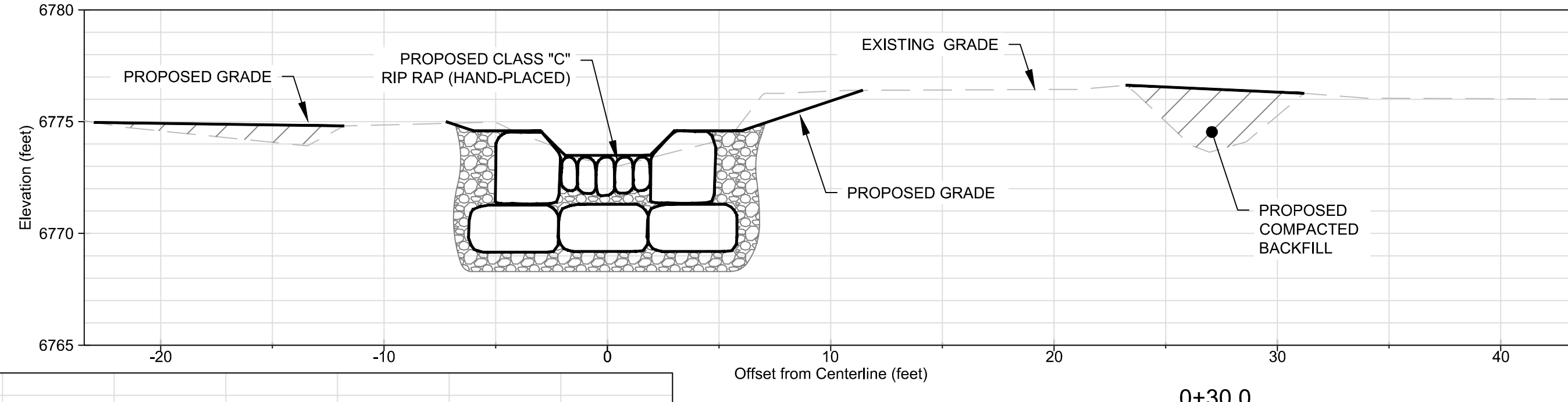
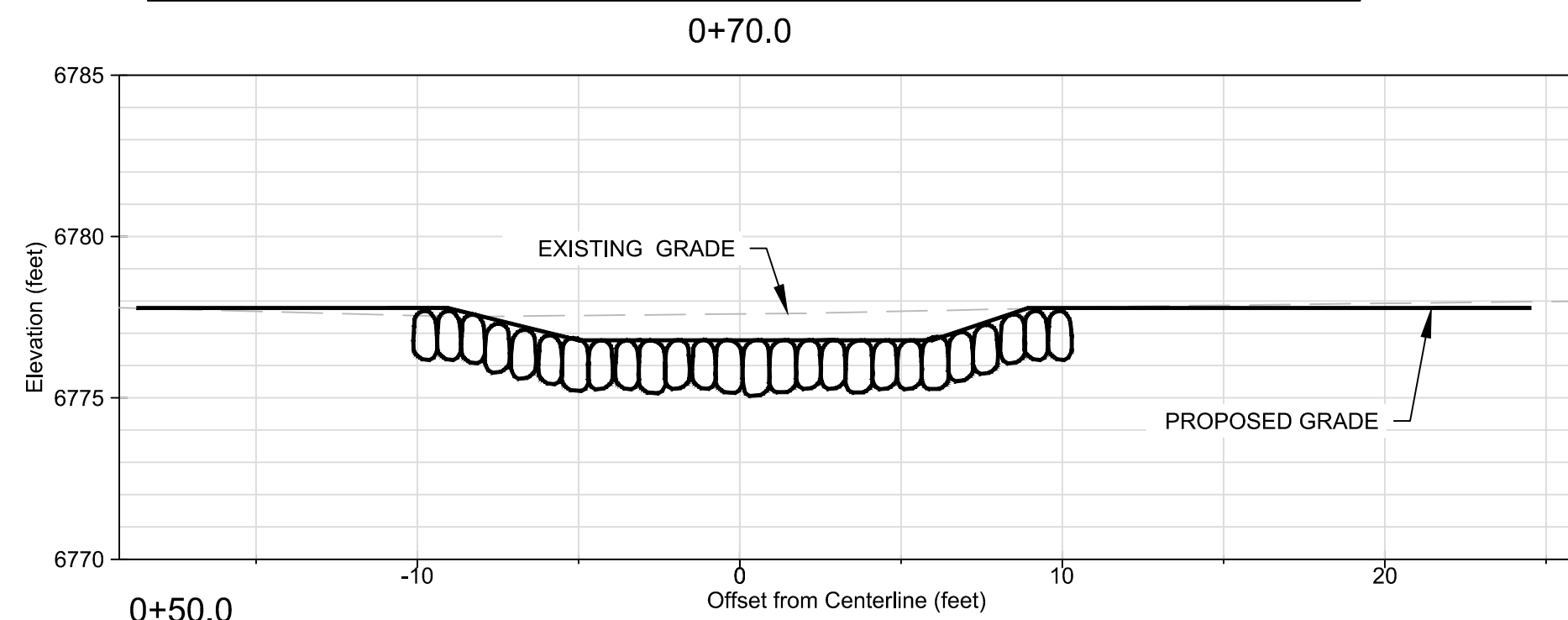
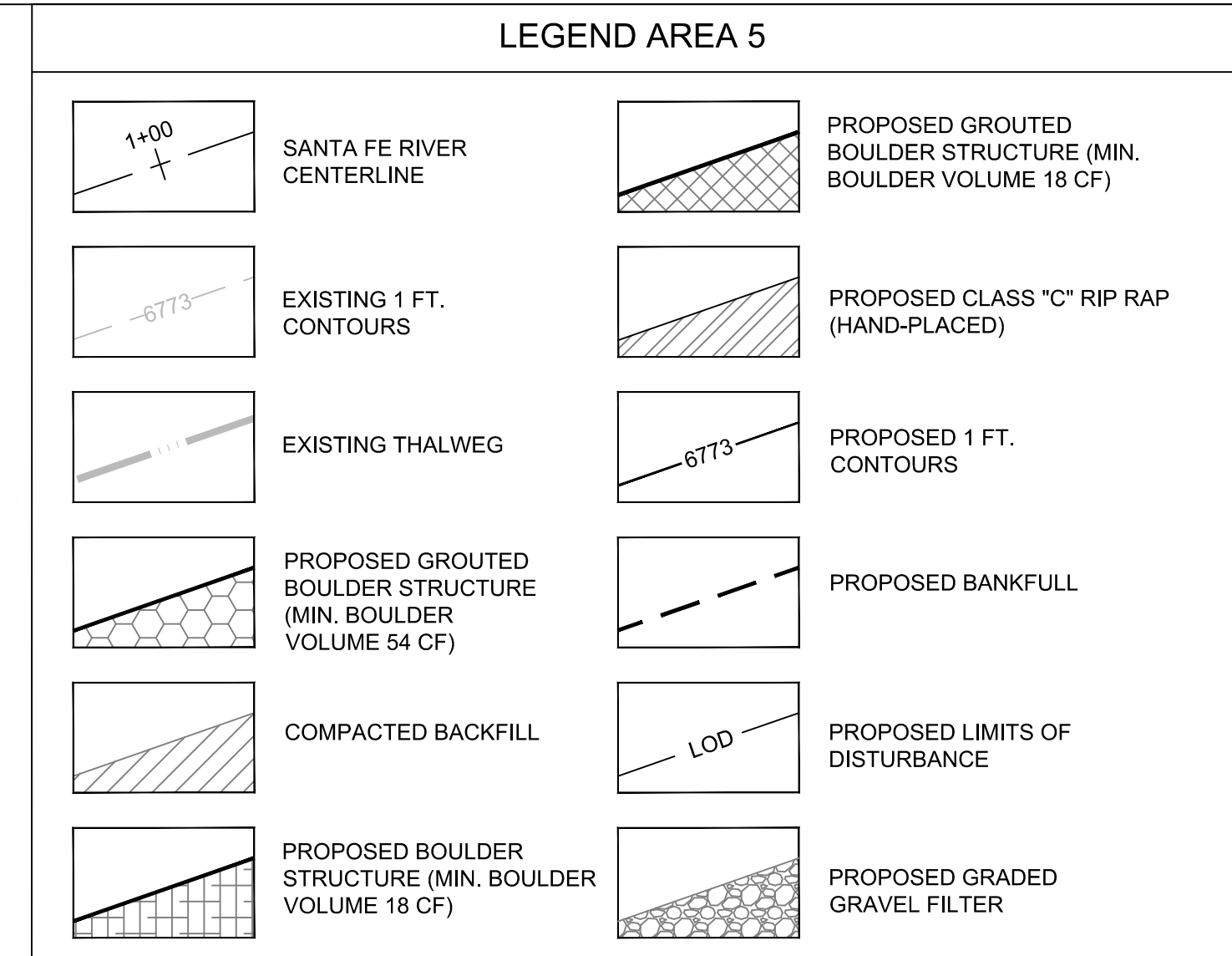
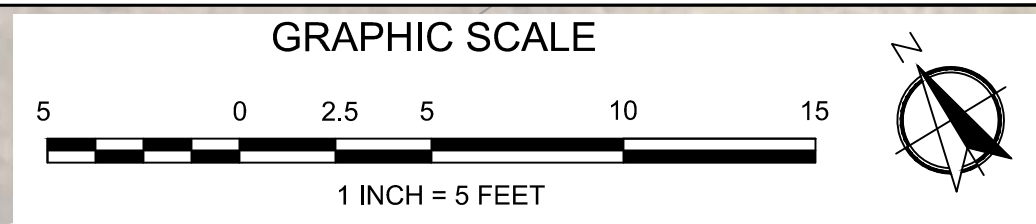
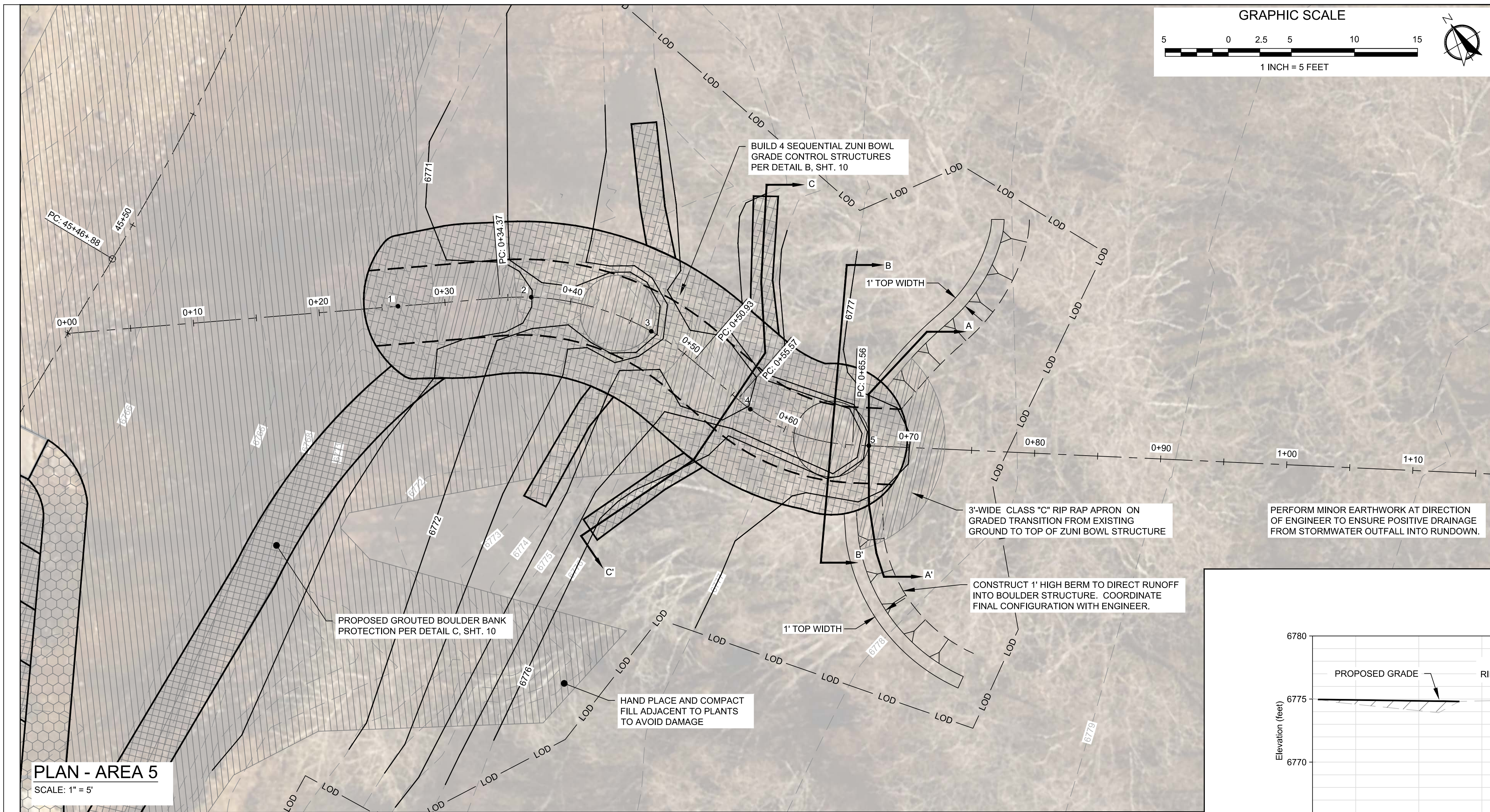
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PLAN & PROFILE - AREAS 1-4

City of Santa Fe  
SANTA FE RIVER  
FLOOD DAMAGE REPAIR  
RICARDO BRIDGE TO DON JOSE OUTFALL

Designed By: JMC	Checked By: WJM	Project Number: 19060	Sheet: 4 of 17
Drawn By: AMR	Date: June 28, 2019		





DESCRIPTION	Q2-YEAR (CFS)	W <sub>bkf</sub> (FT)	D <sub>bkf</sub> (FT)	D <sub>pool max</sub> (FT)
AREA 5	41	6	1.1	3
AREA 9	12	5	0.5	2.5
AREA 10	1.5	4	0.3	2.5

**SECTIONS - AREA 5**  
SCALE: 1" = 5' (H & V)

**PLAN & PROFILE - AREA 5**

**City of Santa Fe  
SANTA FE RIVER  
FLOOD DAMAGE REPAIR  
Ricardo Bridge to Don Jose Storm Drain Outfall**

Designed By: <b>JMC/RMO</b>	Checked By: <b>WJM</b>	Project Number: <b>19060</b>	Sheet: <b>5 of 17</b>
Drawn By: <b>AMR/RMO</b>	Date: <b>June 28, 2019</b>		

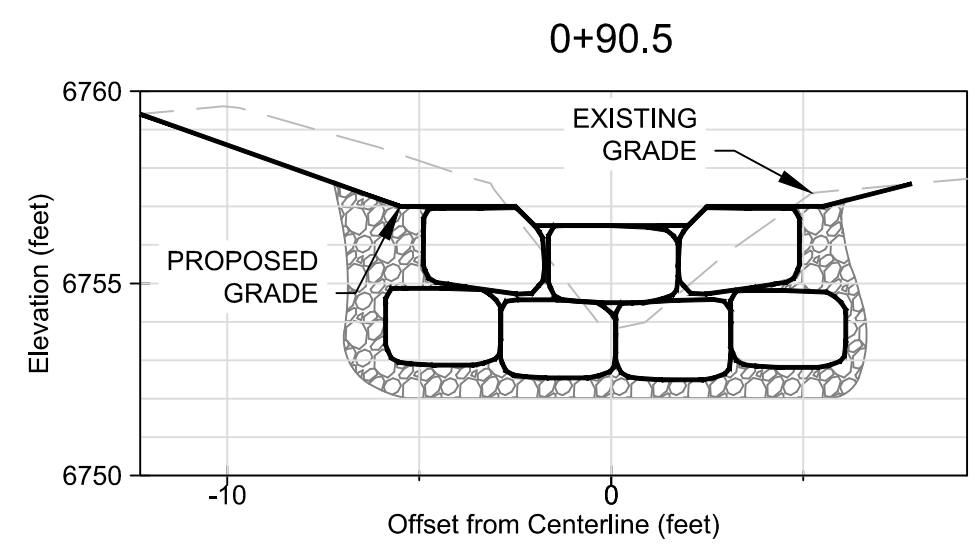
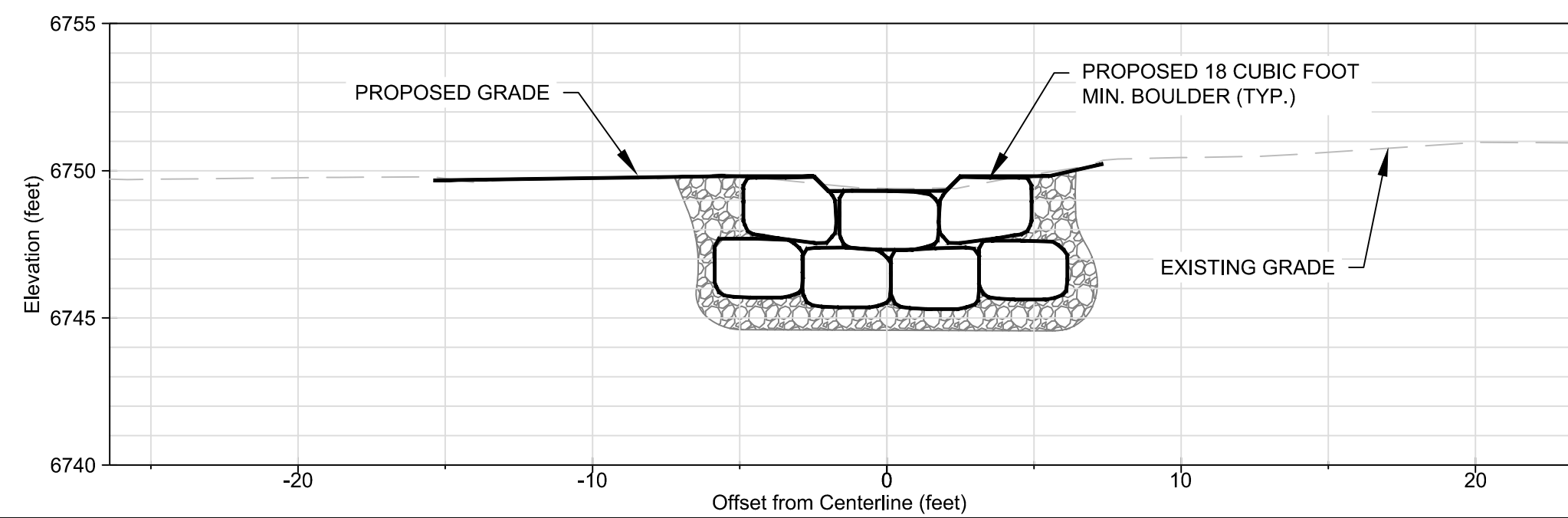
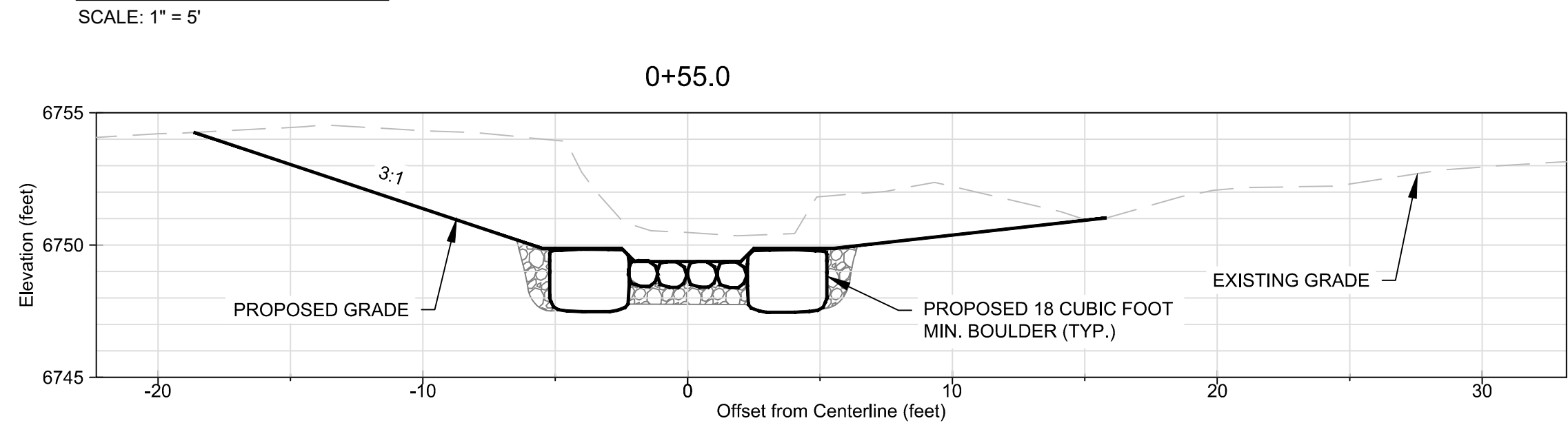
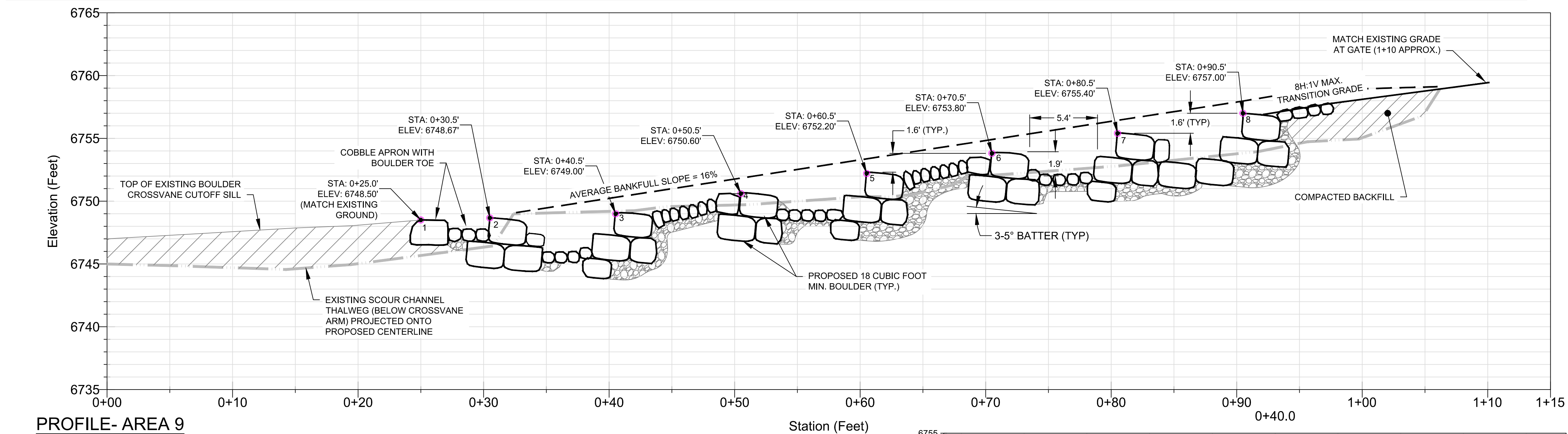
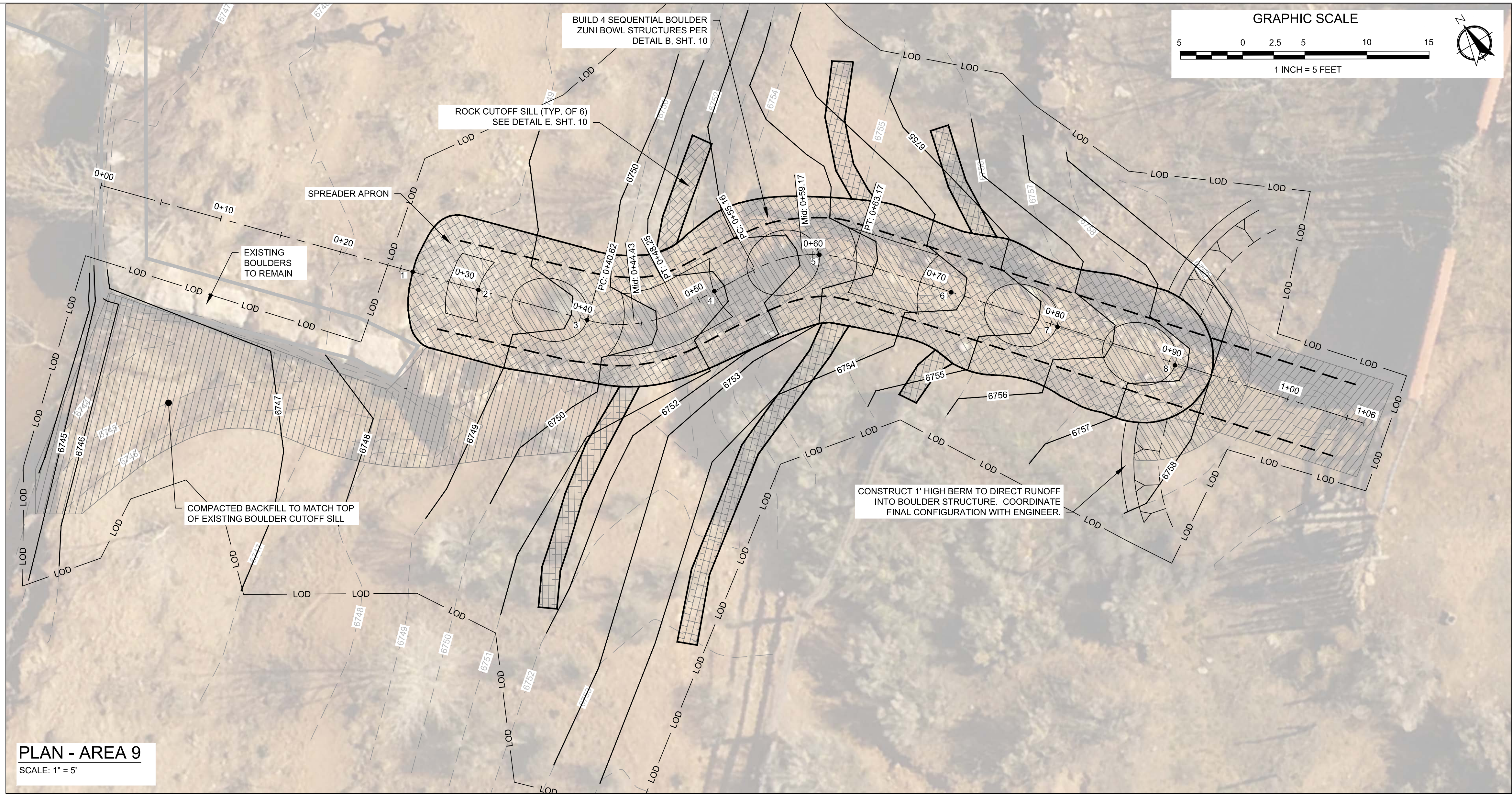
**SITES SOUTHWEST**

**William J. Miller Engineers, Inc.**  
1511 Third St.,  
Santa Fe, NM 87505









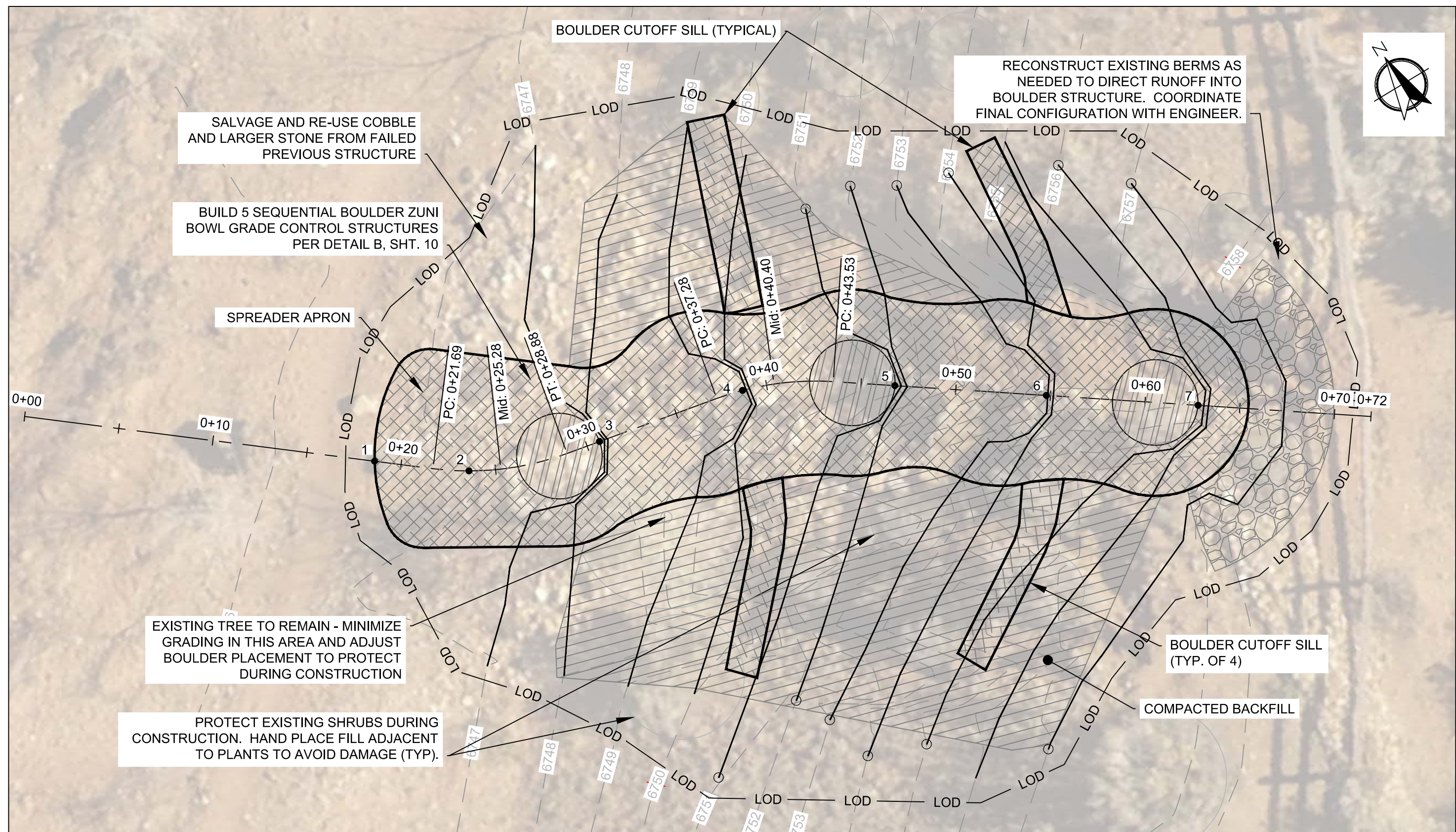
William J. Miller Engineers, Inc.  
1511 Third St.,  
Santa Fe, NM 87505

PLAN & PROFILE - AREA 9

City of Santa Fe  
SANTA FE RIVER  
FLOOD DAMAGE REPAIR  
Ricardo Bridge to Don Jose Storm Drain Outfall

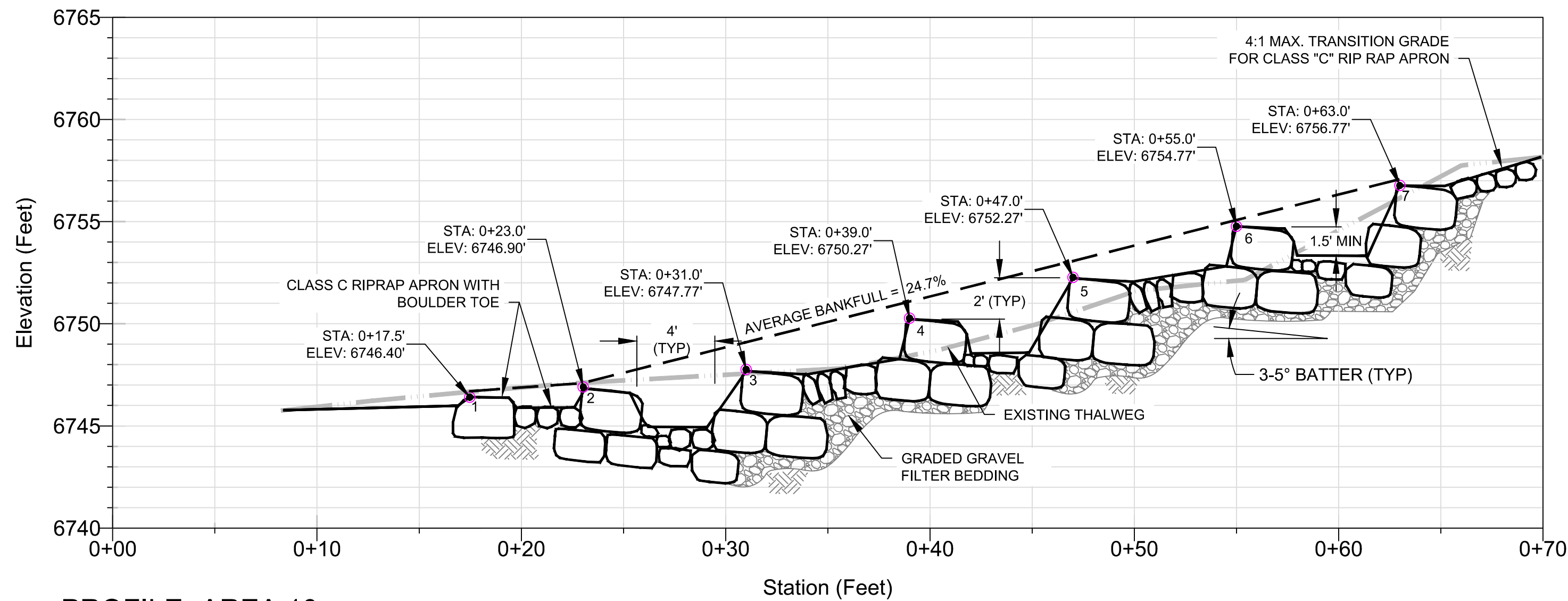
Designed By: JMC/RMO  
Drawn By: AMR/RMO  
Checked By: WJM  
Date: June 28, 2019  
Project Number: 19060  
Sheet: 7 of 17





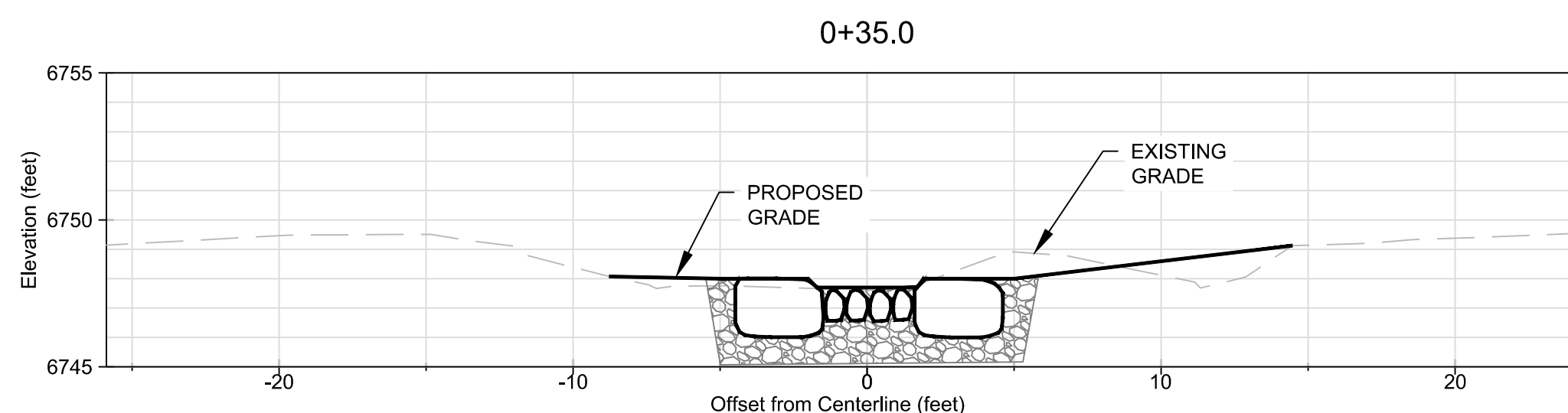
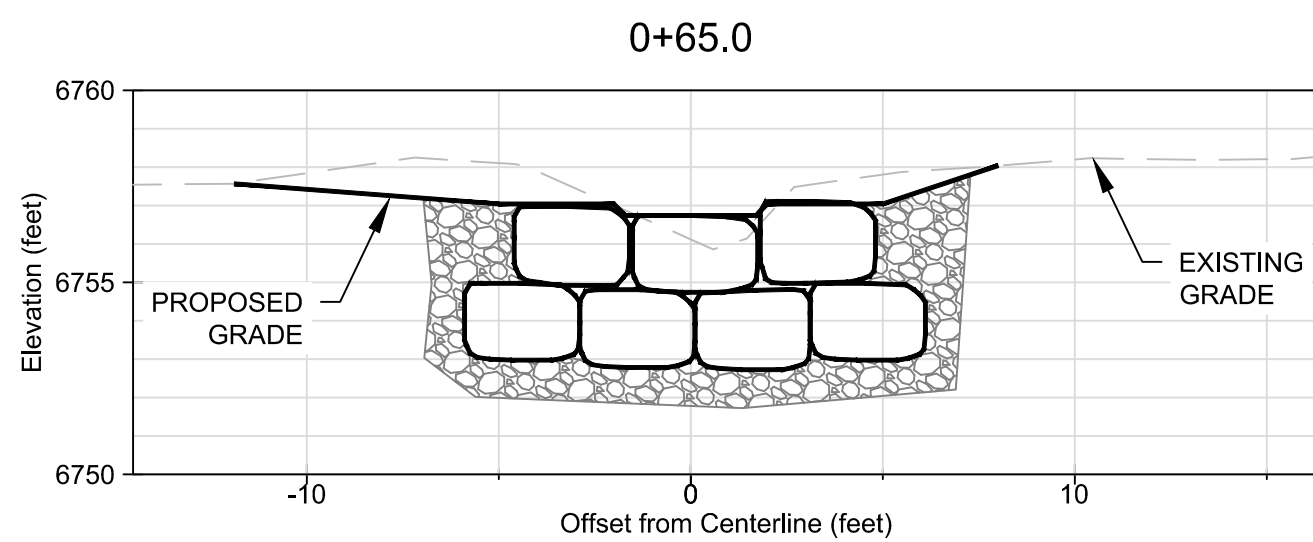
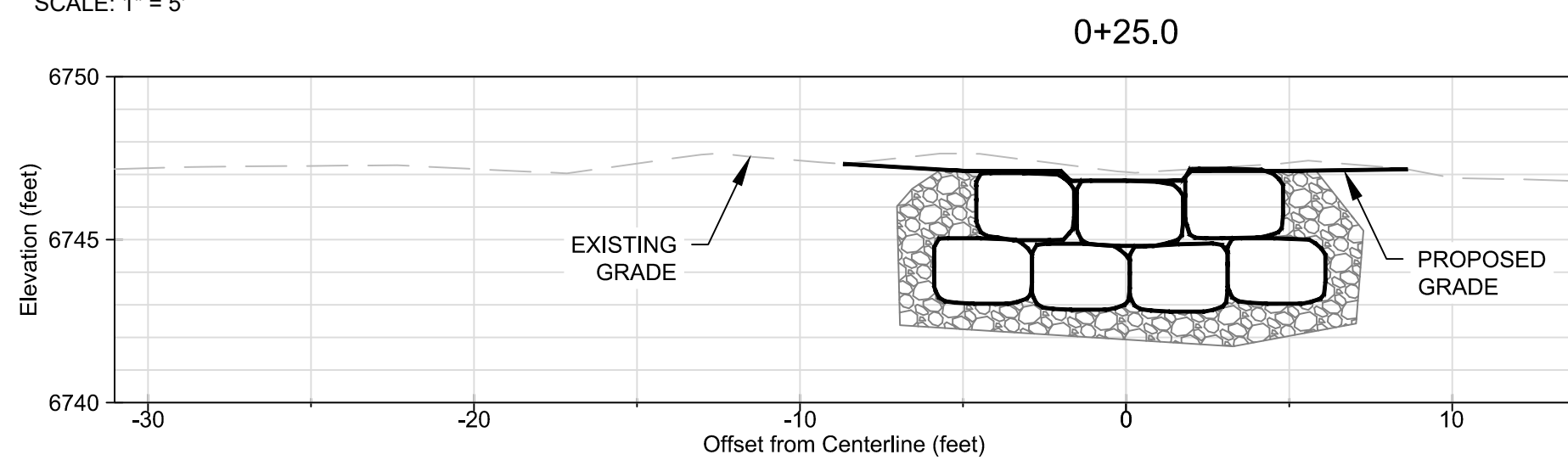
PLAN - AREA 10

SCALE: 1" = 5'



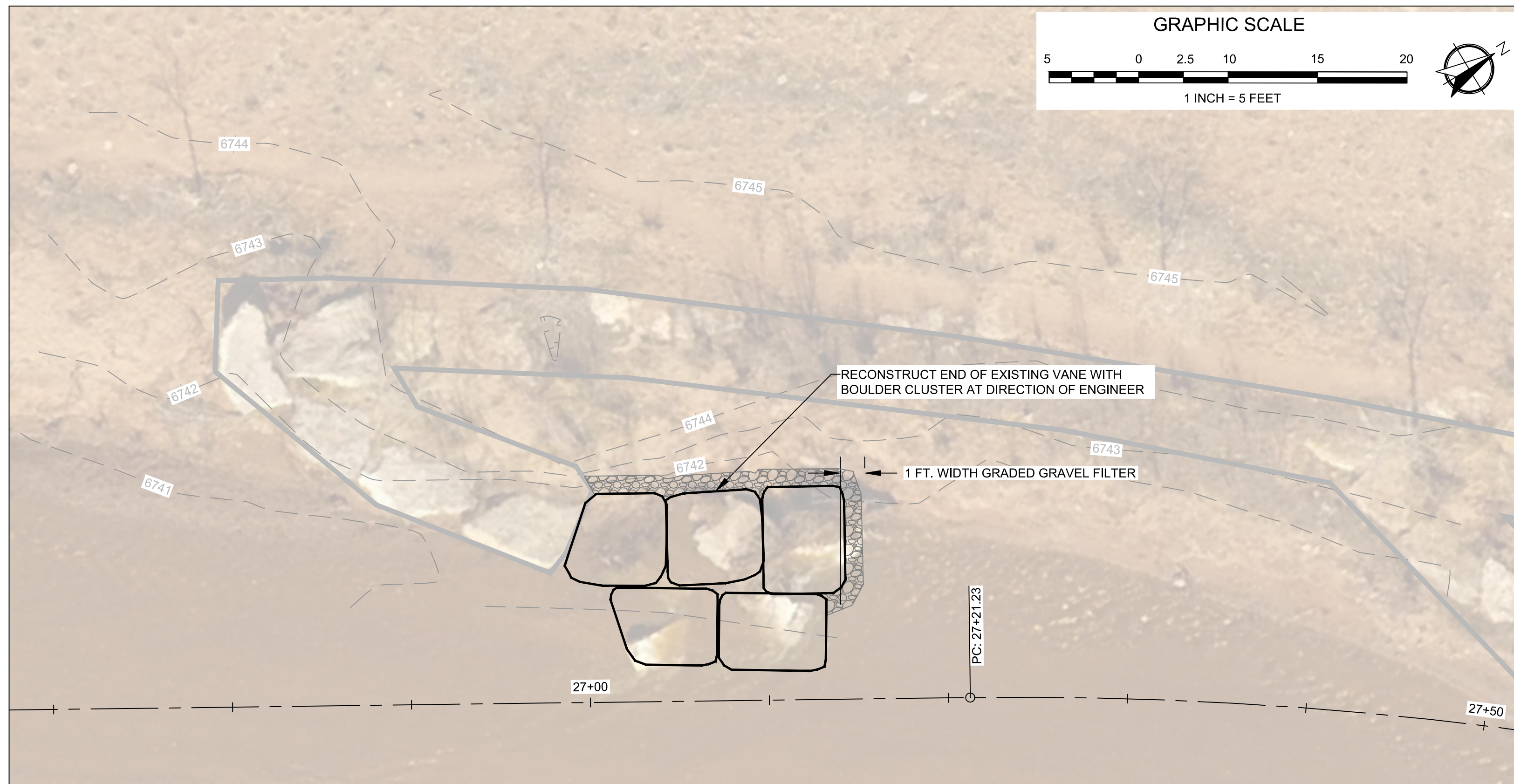
PROFILE- AREA 10

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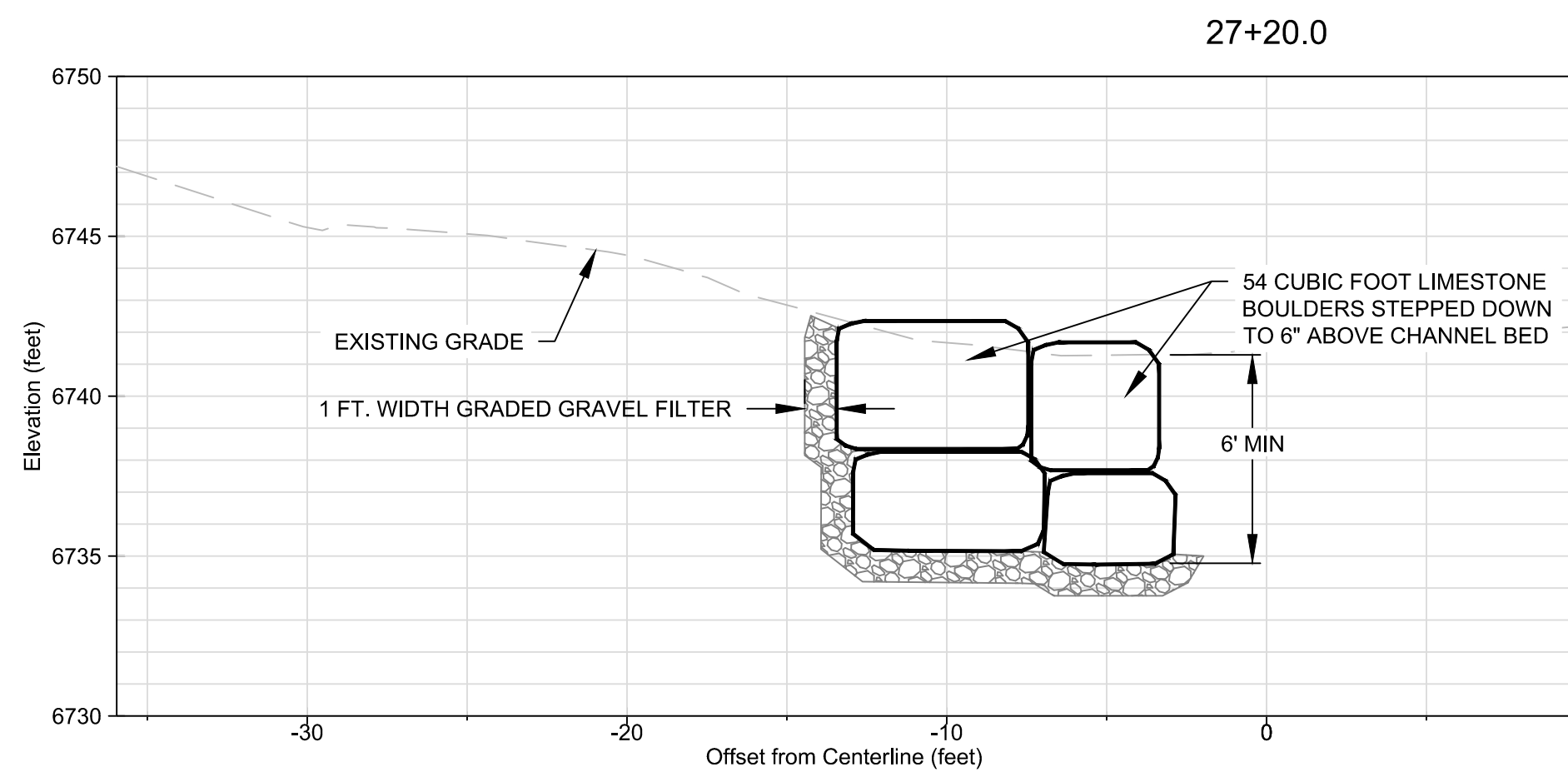
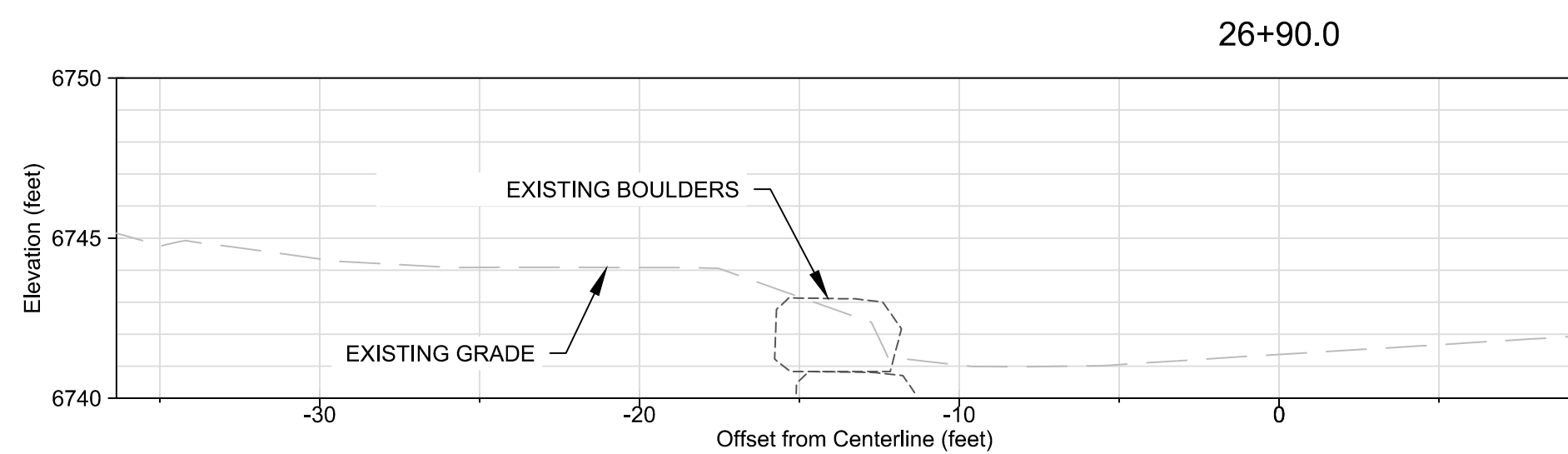
SECTIONS - AREA 10

SCALE: 1" = 5'



PLAN - AREA 11

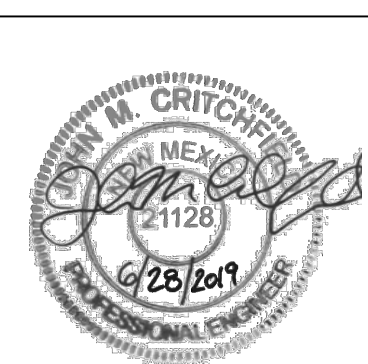
SCALE: 1" = 5'



SECTIONS - AREA 11

SCALE: 1" = 5'

LEGEND AREAS 10 & 11			
	SANTA FE RIVER CENTERLINE		PROPOSED GROUTED BOULDER STRUCTURE (MIN. BOULDER VOLUME 18 CF)
	EXISTING 1 FT. CONTOURS		PROPOSED CLASS "C" RIP RAP (HAND-PLACED)
	EXISTING THALWEG		PROPOSED 1 FT. CONTOURS
	PROPOSED GROUTED BOULDER STRUCTURE (MIN. BOULDER VOLUME 54 CF)		PROPOSED BANKFULL
	COMPACTED BACKFILL		PROPOSED LIMITS OF DISTURBANCE
	PROPOSED BOULDER STRUCTURE (MIN. BOULDER VOLUME 18 CF)		PROPOSED GRADED GRAVEL FILTER



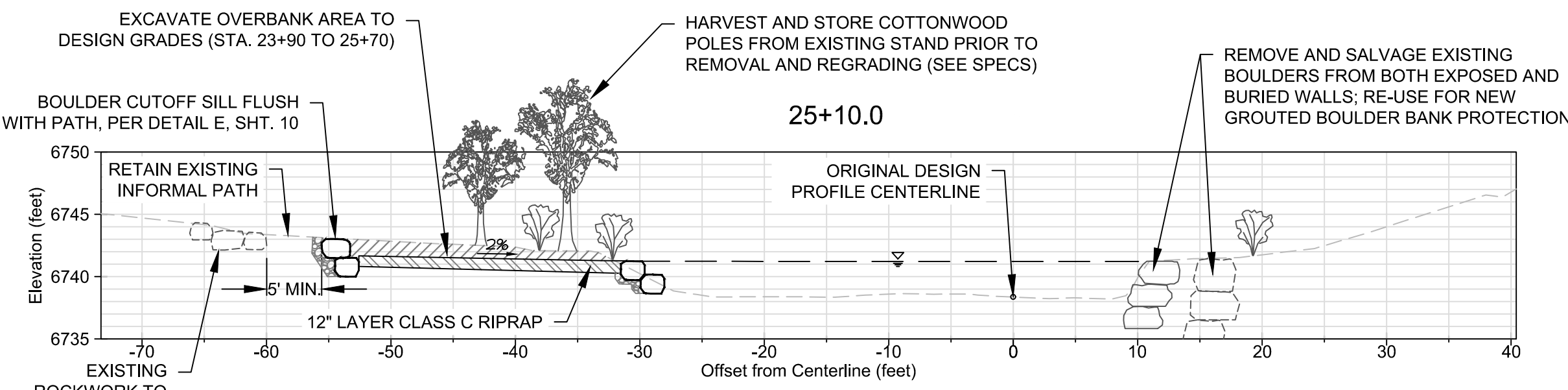
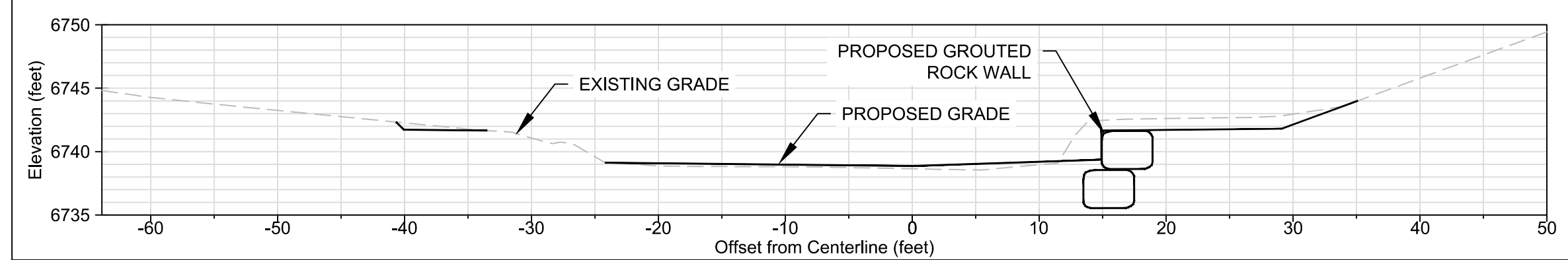
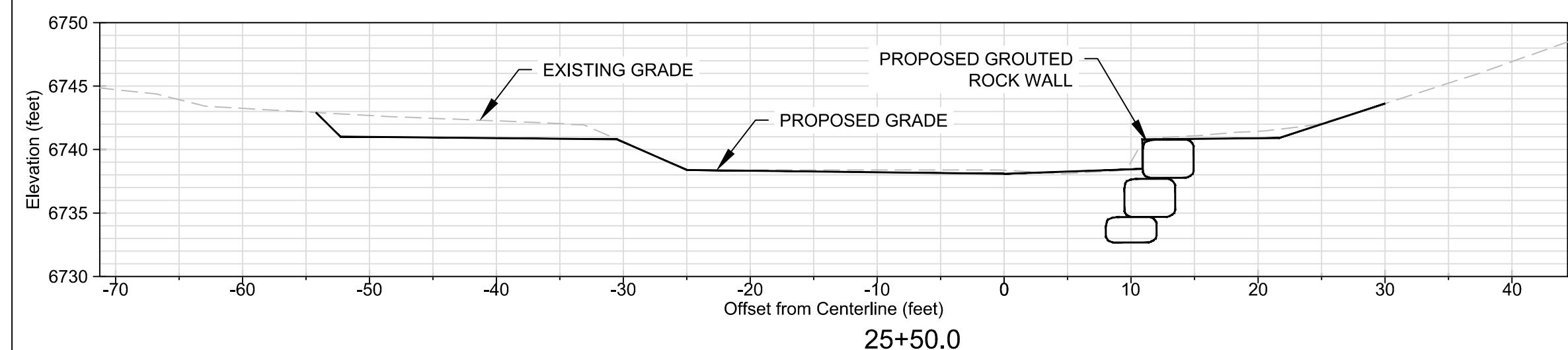
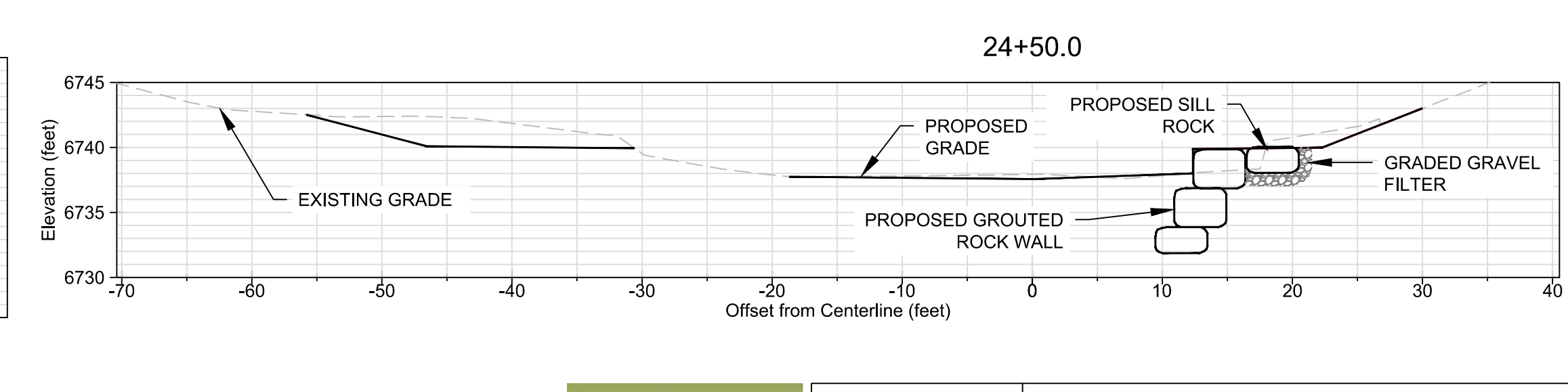
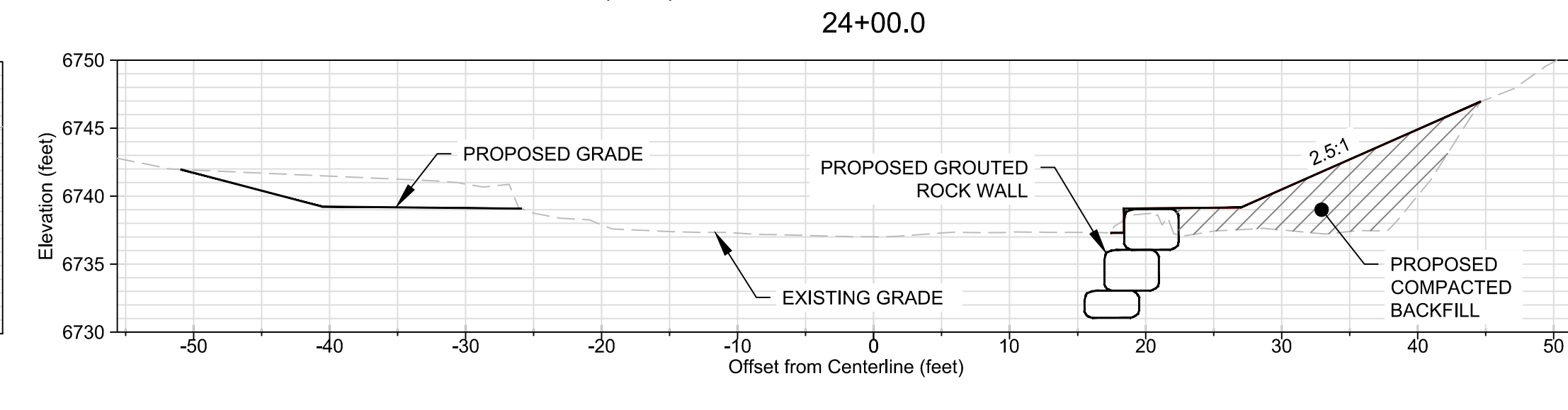
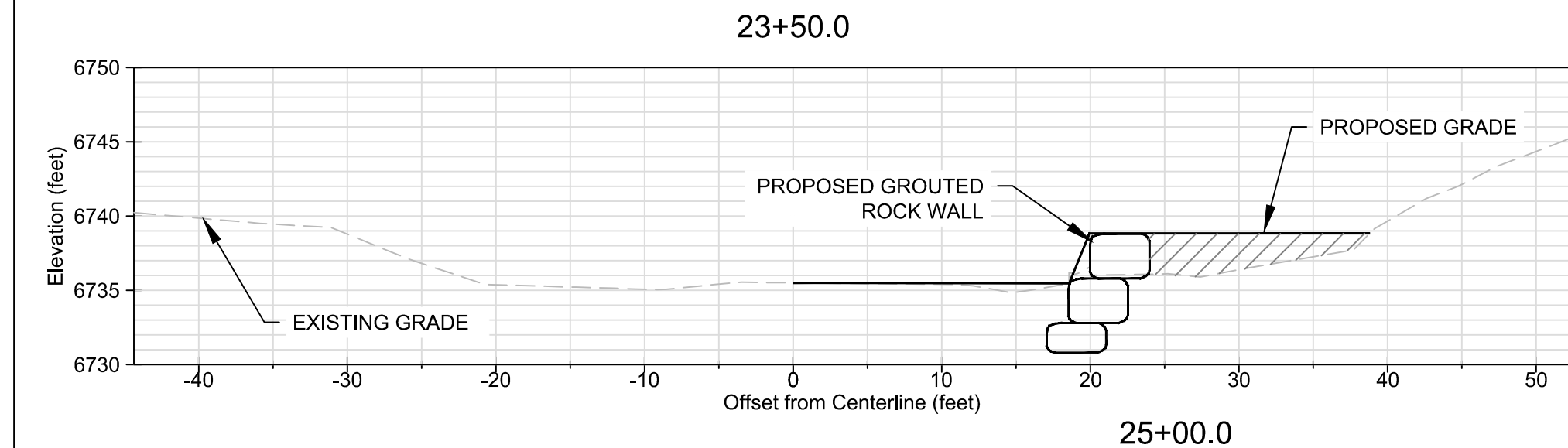
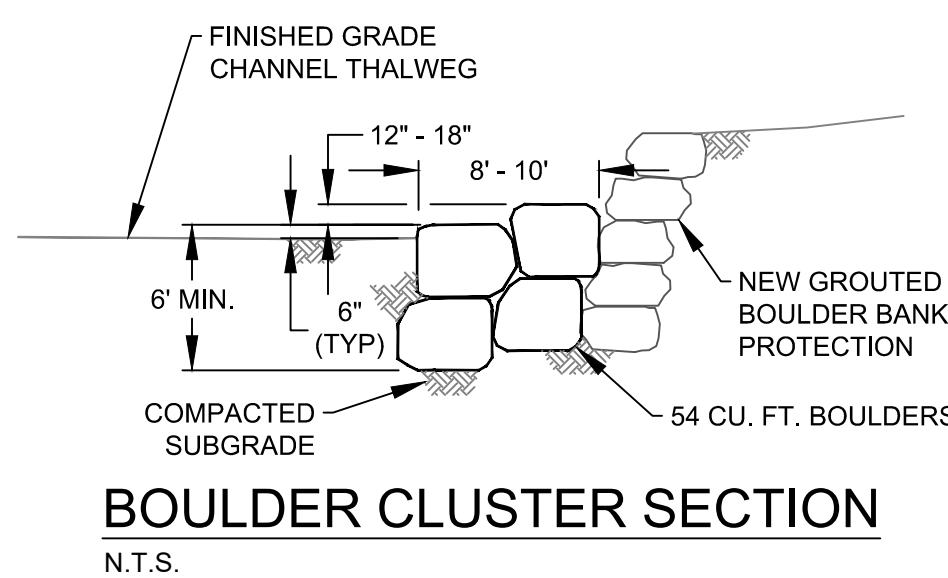
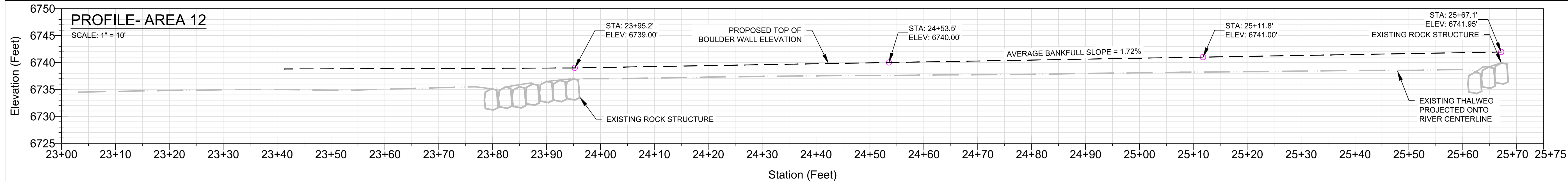
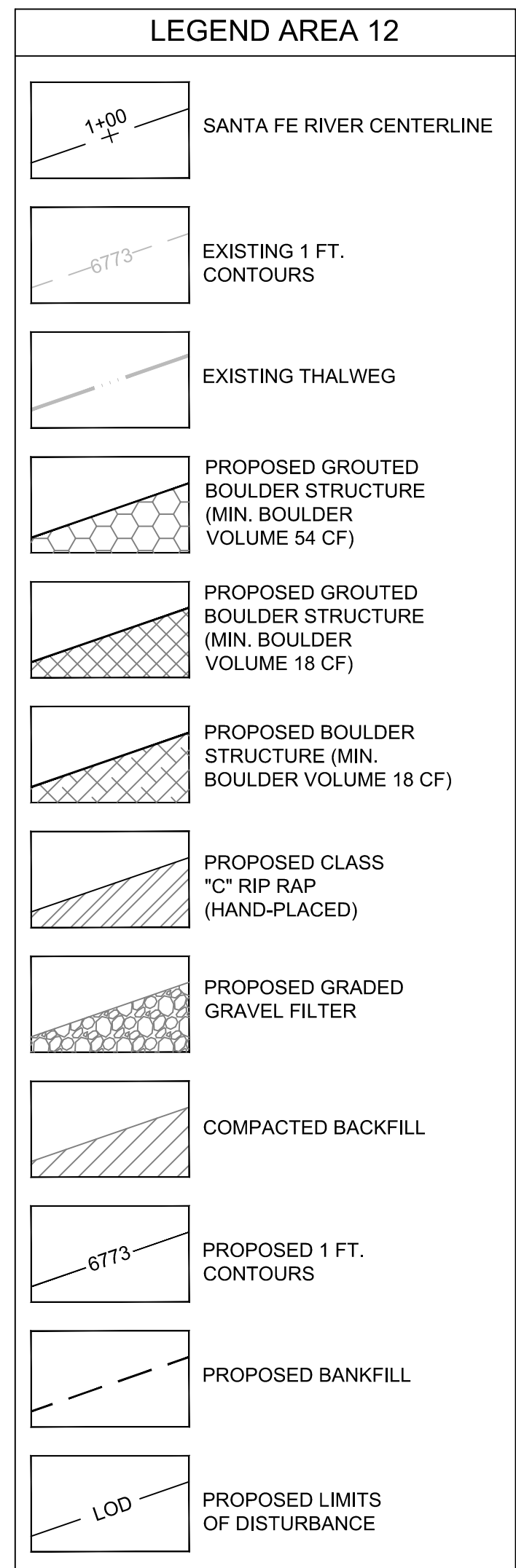
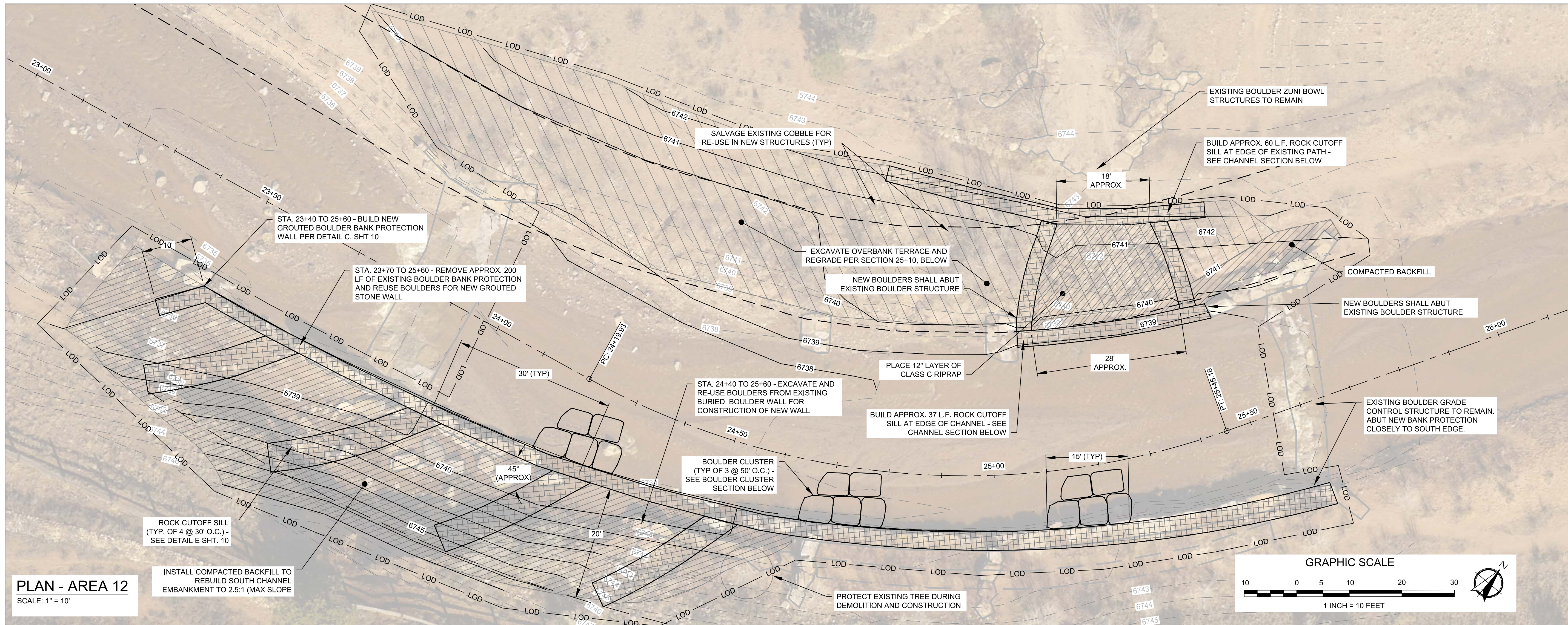
	William J. Miller Engineers, Inc. 1511 Third St., Santa Fe, NM 87505
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PLAN & PROFILE - AREA 10  
PLAN & SECTIONS - AREA 11

City of Santa Fe  
SANTA FE RIVER  
FLOOD DAMAGE REPAIR  
Ricardo Bridge to Don Jose Storm Drain Outfall

Designed By: JMC/RMO	Checked By: WJM	Project Number: 19060	Sheet: 8 of 17
Drawn By: AMR/RMO	Date: June 28, 2019		





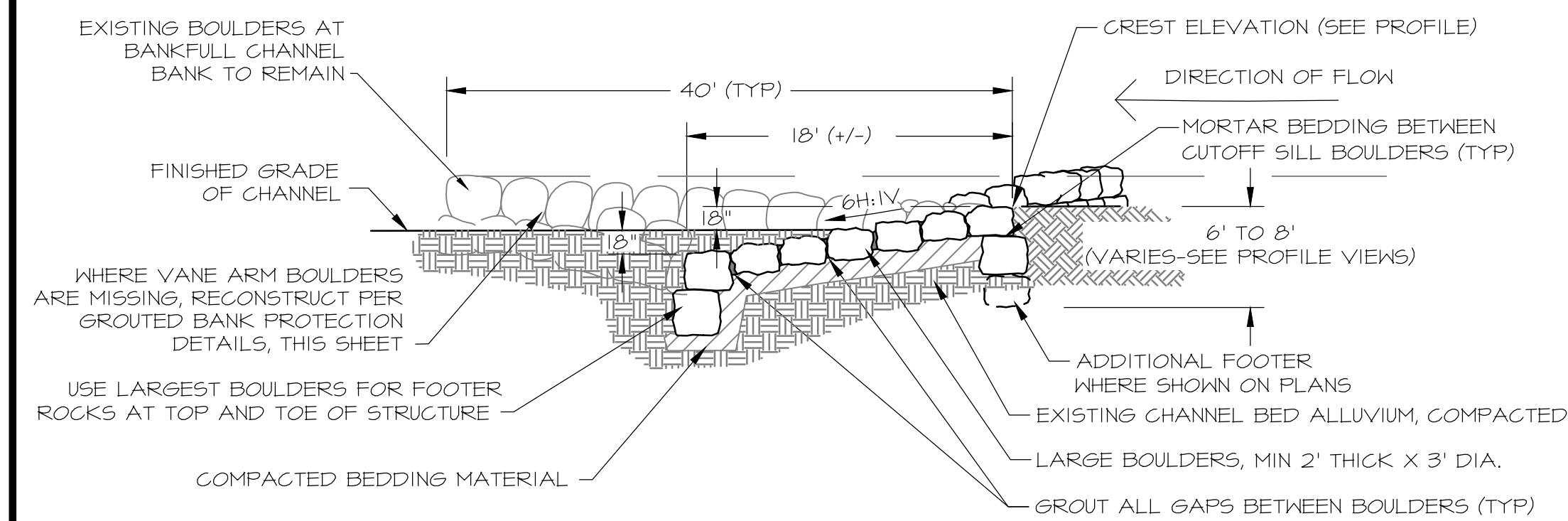
**William J. Miller Engineers, Inc.**  
1511 Third St.,  
Santa Fe, NM 87505

**PLAN & PROFILE - AREA 12**

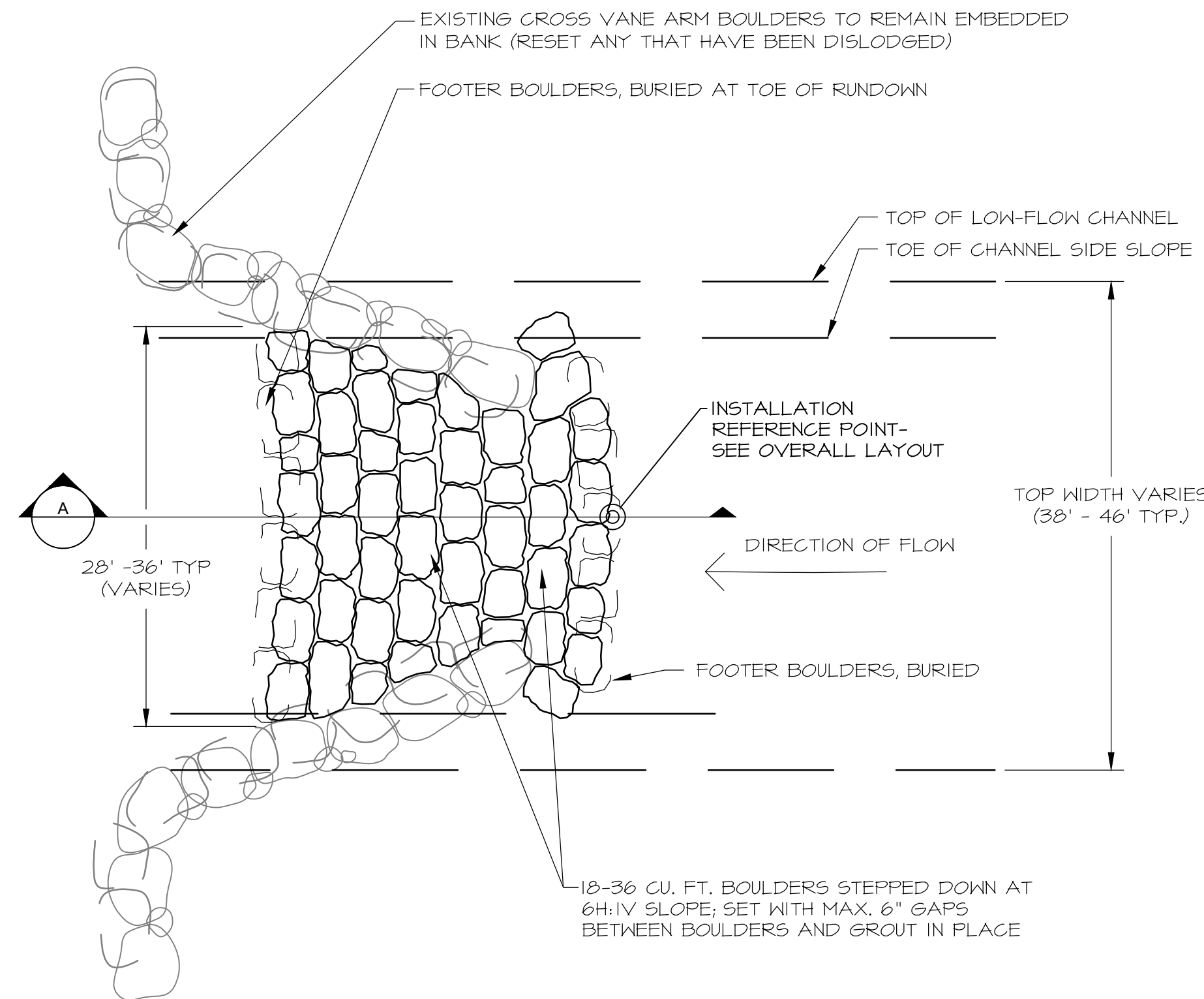
**City of Santa Fe**  
**SANTA FE RIVER**  
**FLOOD DAMAGE REPAIR**  
**Ricardo Bridge to Don Jose Storm Drain Outfall**

Designed By: JMC/RMO	Checked By: WJM	Project Number: 19060	Sheet: 9 of 17
Drawn By: AMR/RMO	Date: June 28, 2019		





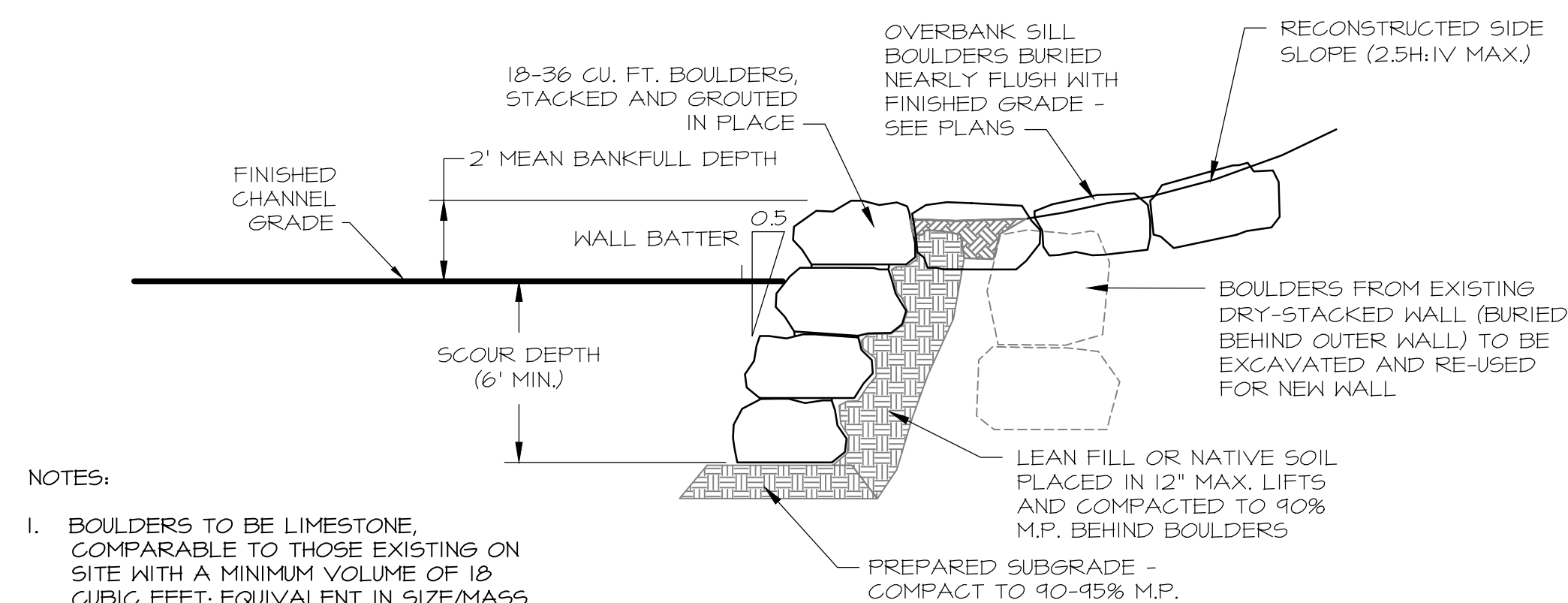
SECTION A



PLAN VIEW

**A** GROUTED BOULDER RUNDOWN  
(FOR CROSS VANE RECONSTRUCTION)

SCALE: 1" = 10'

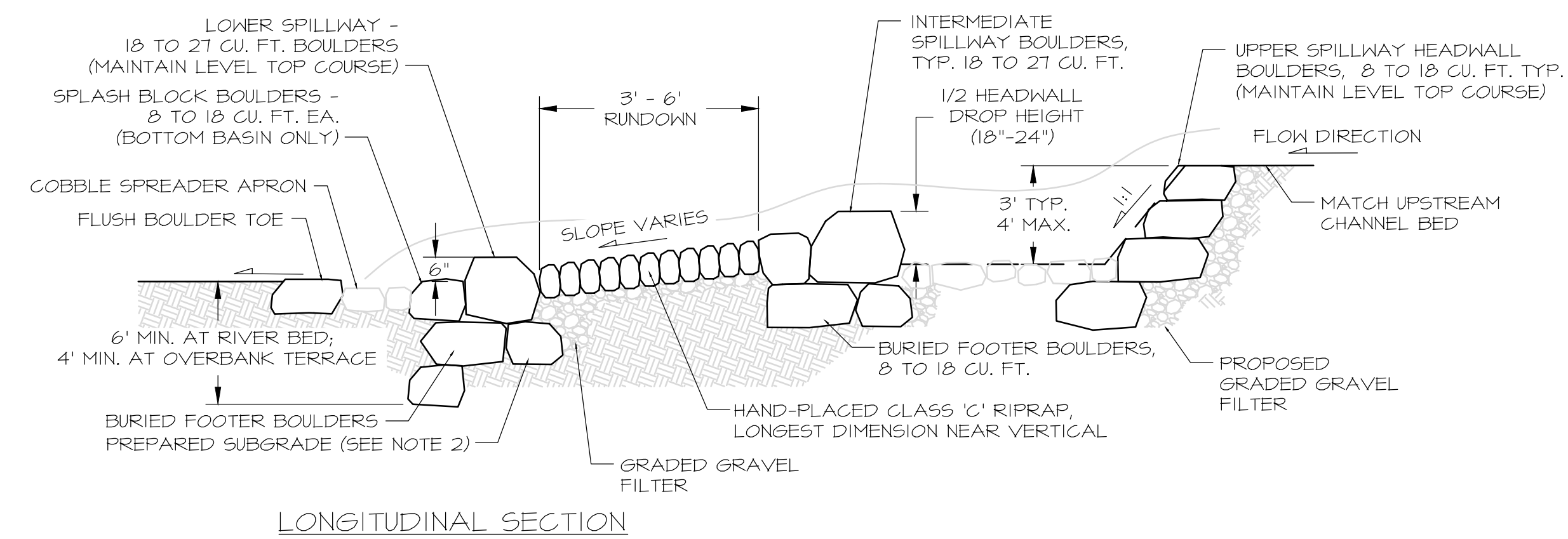


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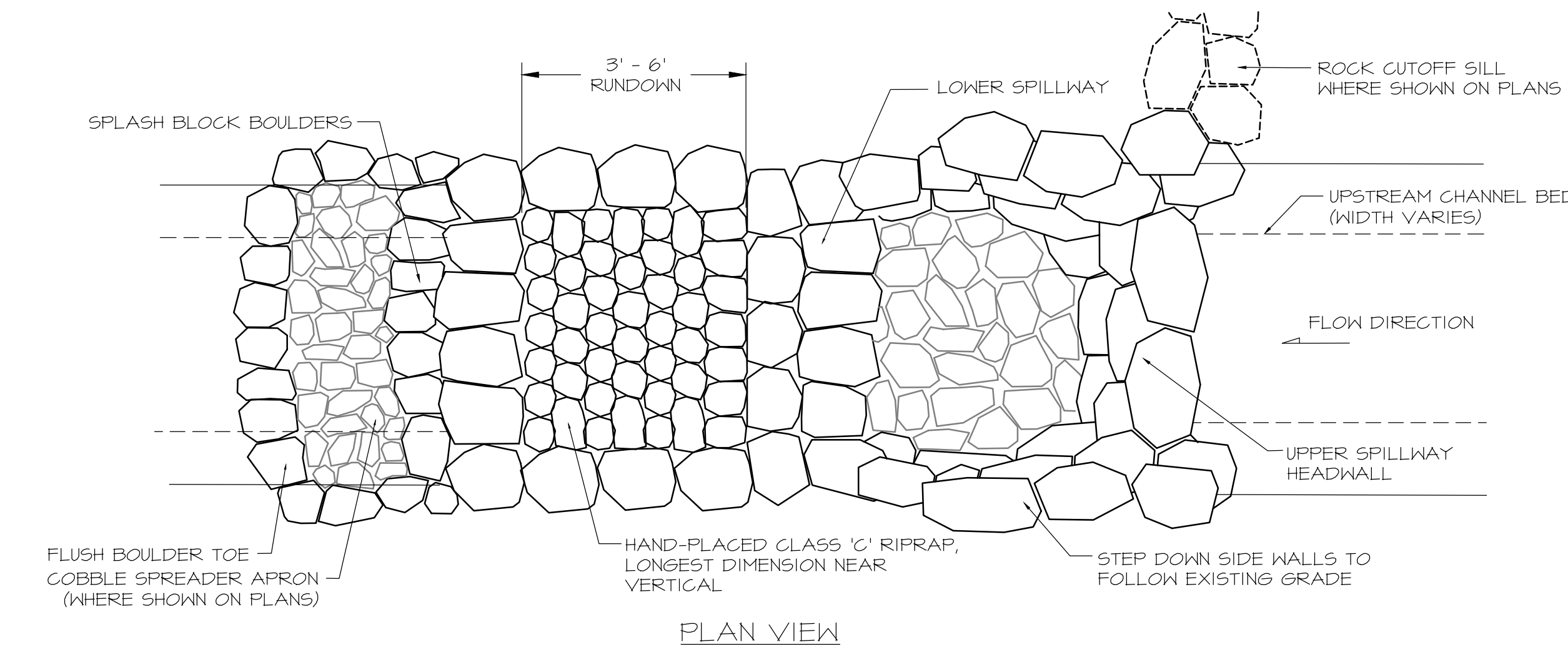
- BOULDERS TO BE LIMESTONE, COMPARABLE TO THOSE EXISTING ON SITE WITH A MINIMUM VOLUME OF 18 CUBIC FEET; EQUIVALENT IN SIZE/MASS TO A 2' X 3' X 3' CUBE, AVERAGE, WITH NO DIMENSION TO BE SMALLER THAN 2'.
- LOCATIONS OF BOULDER STRUCTURES ON PLAN ARE APPROXIMATE. COORDINATE FINAL PLACEMENT AND CONFIGURATION WITH PROJECT ENGINEER.

**C** GROUTED BOULDER BANK PROTECTION

SCALE: 1" = 10'



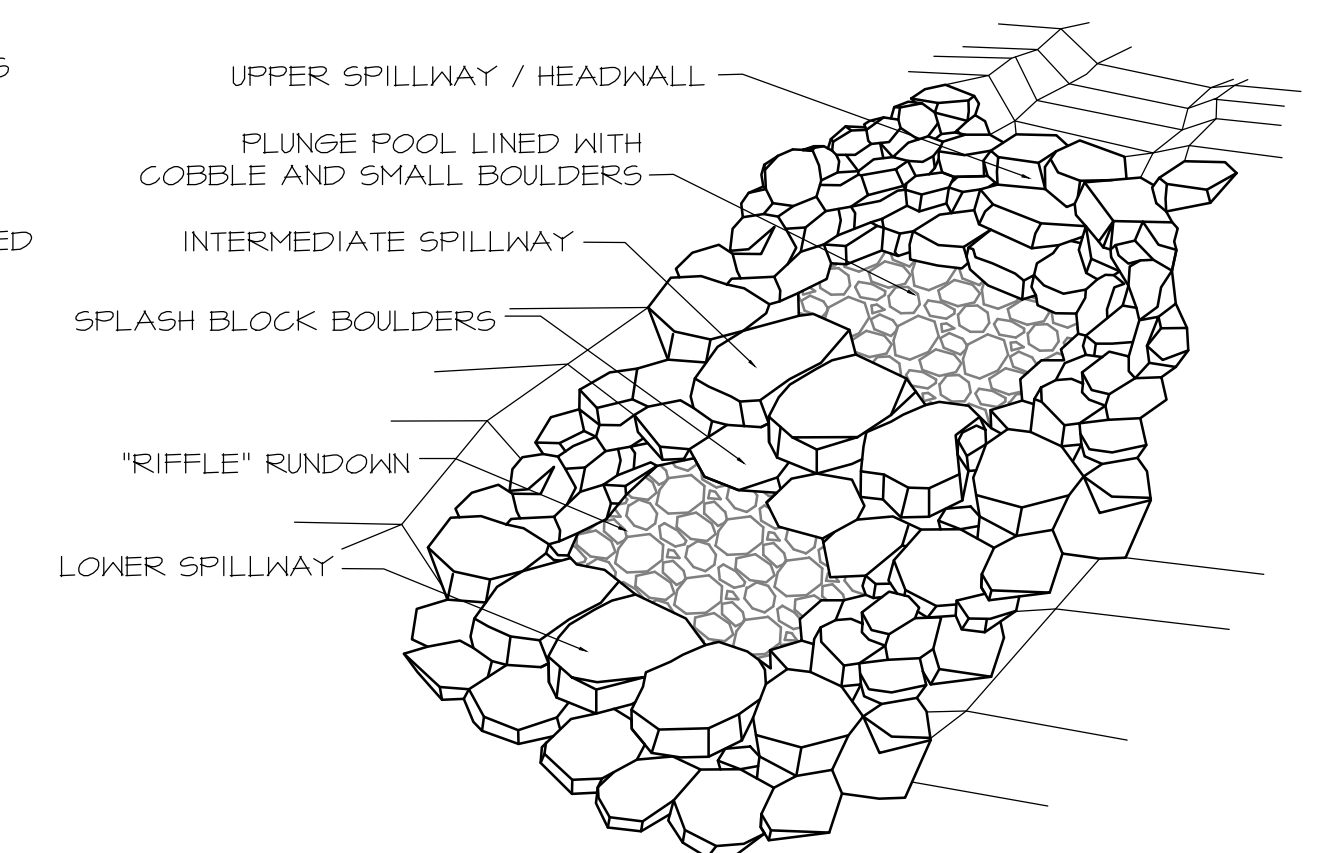
LONGITUDINAL SECTION



PLAN VIEW

NOTES:

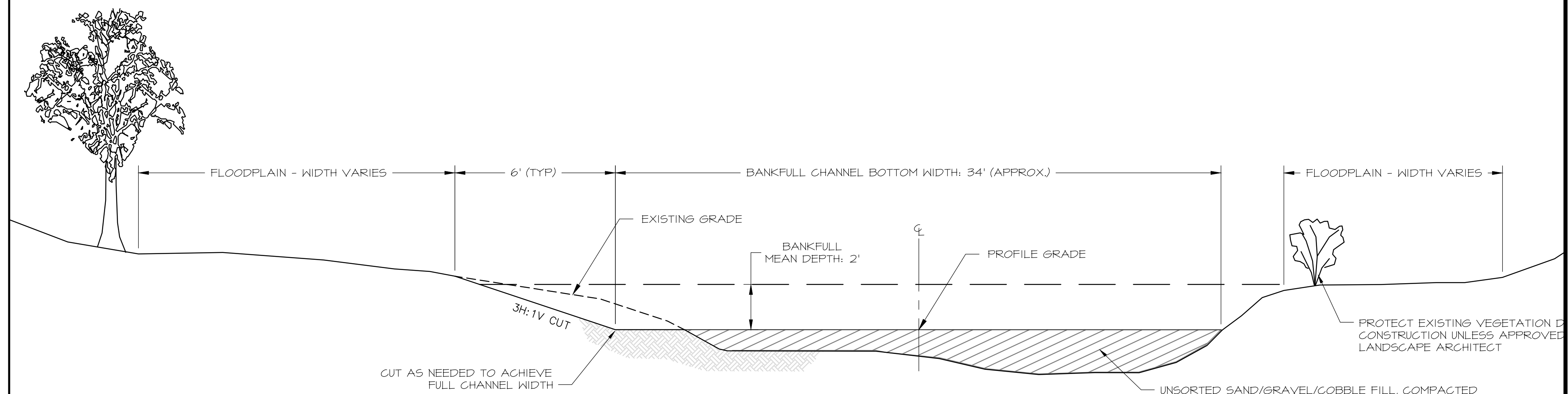
- BOULDER SIZES AND SHAPES MAY VARY, BUT SHOULD BE ANGULAR OR FLAT-SIDED TO PROMOTE STACKING AND INTERLOCK, AND SHOULD BLEND INTO THE LOCAL ENVIRONMENT.
- LOOSEN SUBGRADE SOILS BEFORE PLACING ROCKS. TAMP BOTTOM COURSES OF ROCK FIRMLY IN PLACE. OFFSET JOINTS OF SUBSEQUENT COURSES FOR MAXIMUM STABILITY OF STRUCTURE.
- CHINK GAPS BETWEEN BOULDERS WITH SMALLER ROCKS TO PROVIDE COMPLETE COVERAGE WITH NO GAPS LARGER THAN 1".
- BACKFILL BEHIND UPSTREAM SIDE OF UNGROUTED STRUCTURES WITH MINIMUM 12" LAYER OF GRADED GRAVEL FILTER PER NOTES AND SPECIFICATIONS.



PERSPECTIVE VIEW

**B** "ZUNI BOWL" BOULDER GRADE CONTROL WITH "RIFFLE" RUNDOWN

SCALE: 1" = 4'



**D** TYPICAL CHANNEL GRADING SECTION

NOT TO SCALE

TWO ROWS OF 8 TO 18 CU. FT. BOULDERS, SET ALMOST FLUSH WITH SURFACE (MAX 4" EXPOSED ON UPHILL SIDE)

GRADE VARIES

CLOSELY ABUT BOULDERS AND OFFSET JOINTS BETWEEN ROWS

**E** BOULDER CUTOFF SILL SECTION VIEW

NOT TO SCALE

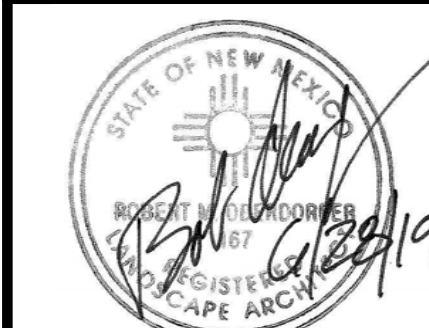


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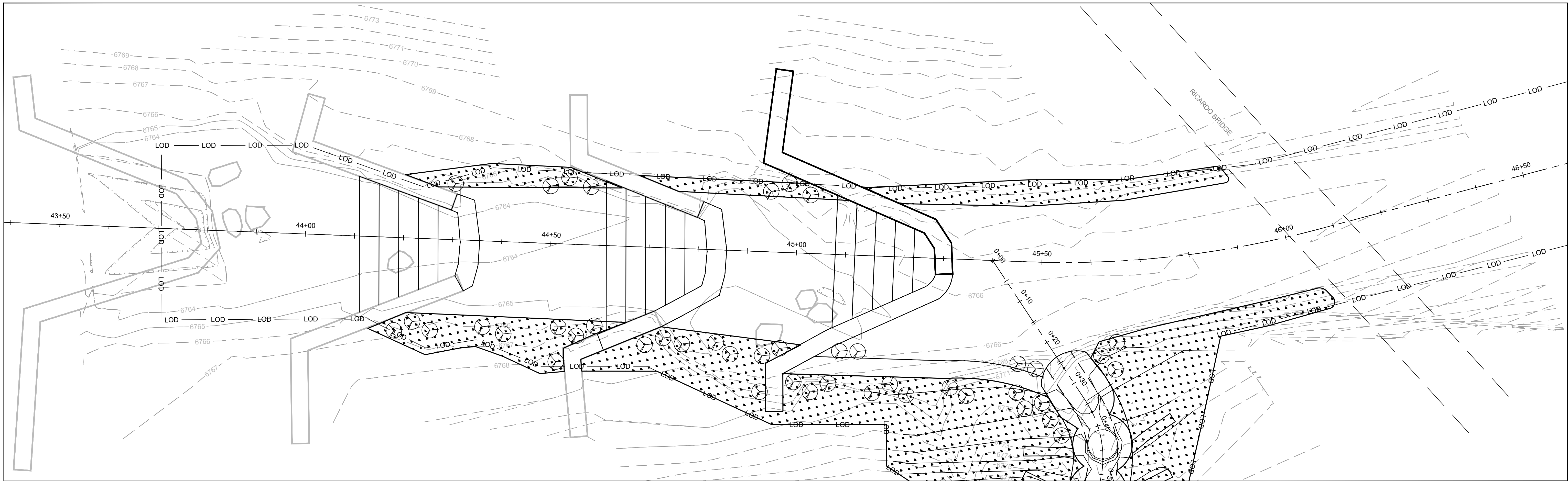
## BOULDER GRADE CONTROL DETAILS

City of Santa Fe  
SANTA FE RIVER  
FLOOD DAMAGE REPAIR  
Ricardo Bridge to Don Jose Storm Drain Outfall

PROJECT BY JMC/RMO	DRAWN BY WJM	PROJECT NUMBER 19060	SHEET 10 of 17
APPROVED BY AMR/RMO	DATE June 28, 2019		

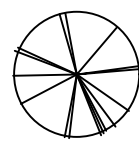
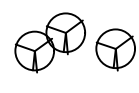
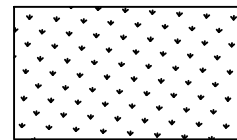






PLAN - AREAS 1-4  
SCALE: 1" = 10'

LEGEND

-  COTTONWOOD POLE PLANTINGS
-  WILLOW WHIP POLE PLANTINGS
-  NMDOT CLASS 'C' NATIVE REVEGETATION SEEDING (SEE REVEGETATION NOTES)

**REVEGETATION NOTE:**

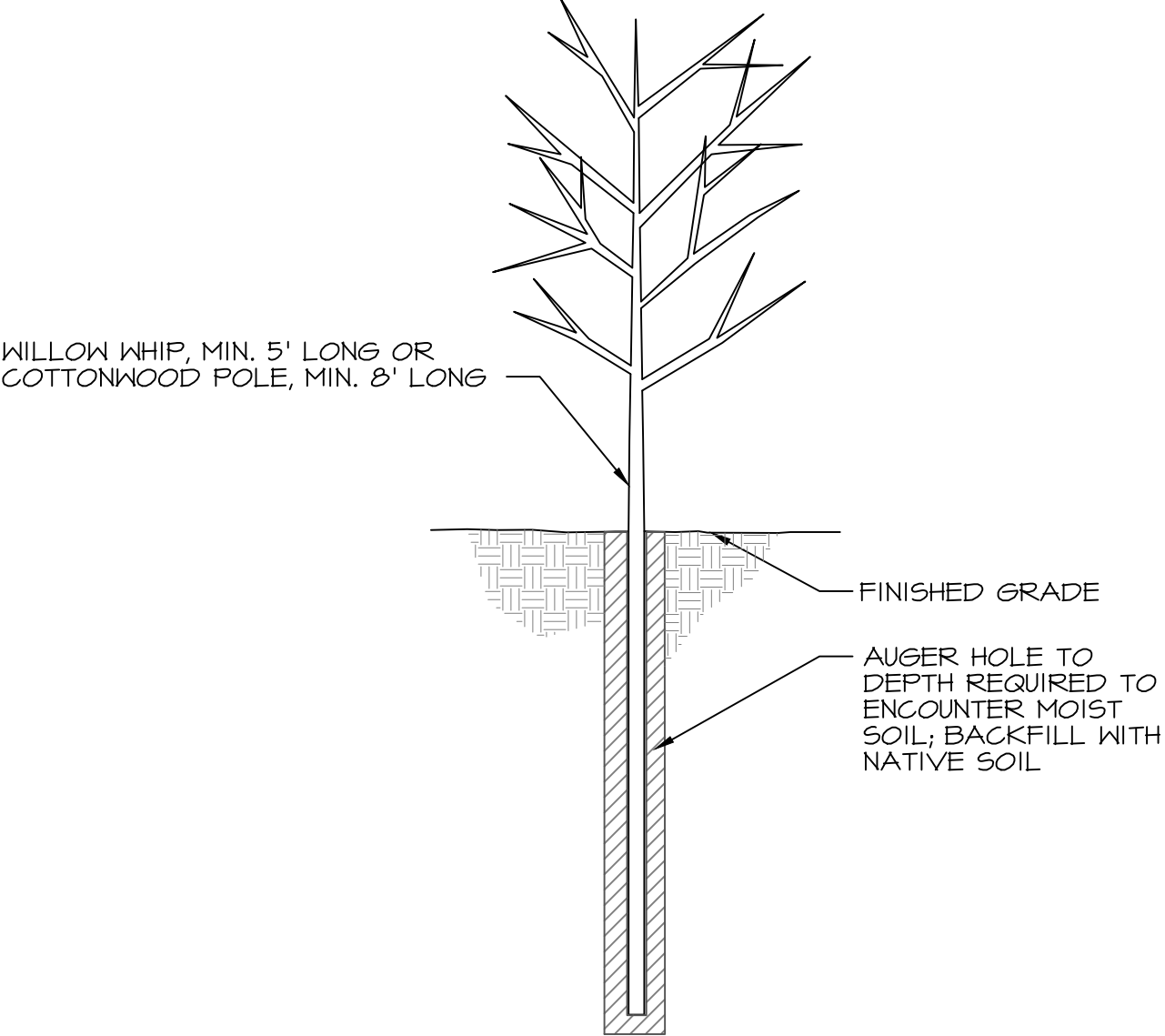
ALL AREAS OUTSIDE OF MAIN CHANNEL THAT ARE DISTURBED DURING CONSTRUCTION SHALL BE RESEEDING WITH THE FOLLOWING SEE MIX:

NATIVE SEED TO BE "SANTA FE TRAIL" GRASS BLEND, AS AVAILABLE FROM CURTIS AND CURTIS, CLOVIS, NM (PHONE: 800-753-4649; EMAIL: SEED@CURTISSEED.COM), OR APPROVED EQUIVALENT. SEED BLEND CONSISTS OF THE FOLLOWING:

- BLUE GRAMA
- SIDEOATS GRAMA
- INDIAN RICEGRASS
- WESTERN WHEATGRASS
- BUFFALOGRASS
- ALKALI SACATON
- SHEEP FESCUE
- LITTLE BLUESTEM

SEEDING RATE TO BE 1 LB PLS/1000 SF

NOTE: ANY AREAS DISTURBED OUTSIDE OF THE LIMITS SHOWN SHALL BE RESEEDING AT THE CONTRACTOR'S EXPENSE FOLLOWING COMPLETION OF CONSTRUCTION.



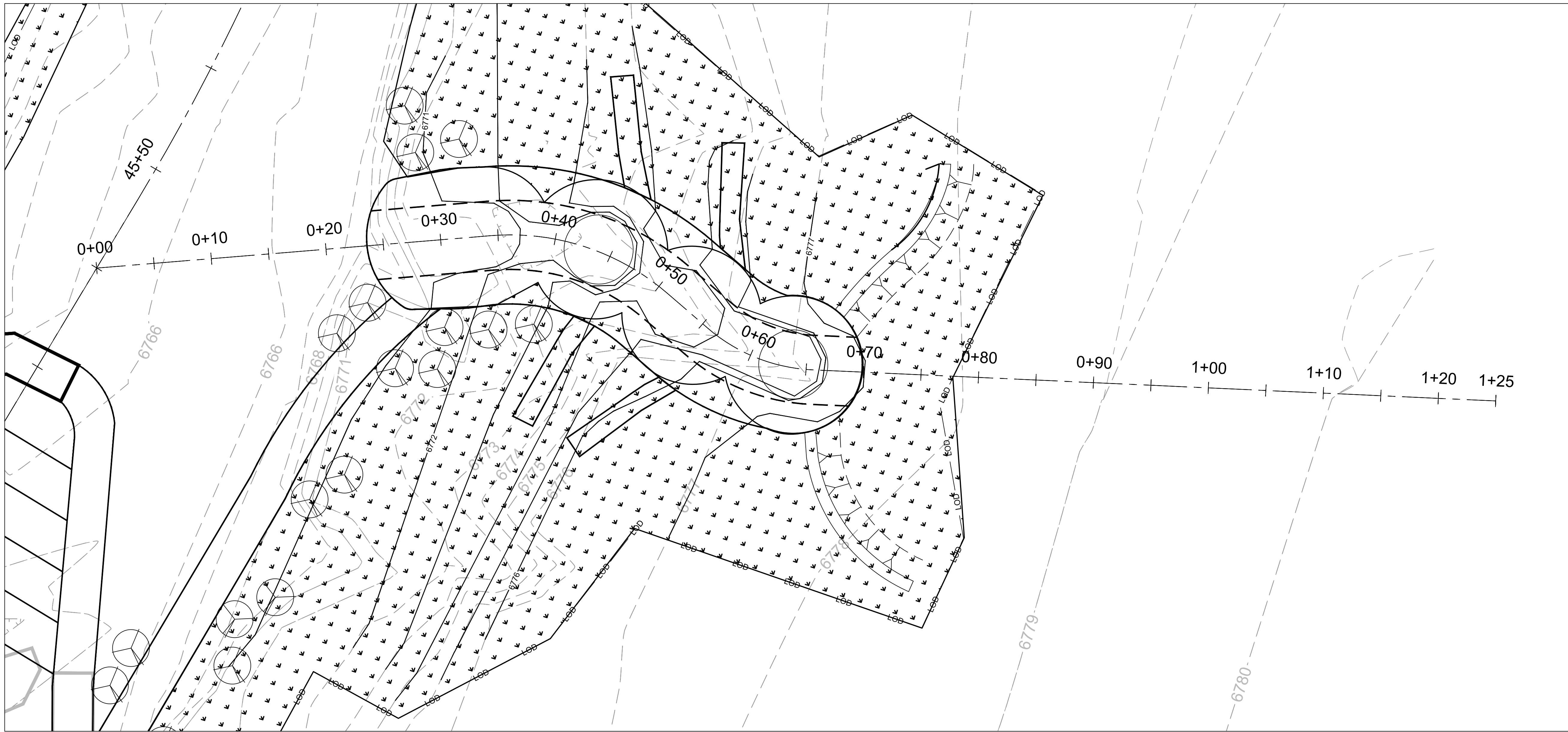
A WILLOW/COTTONWOOD POLE PLANTING DETAIL  
SCALE: 1" = 4'

- POLE PLANTING NOTES:**
1. WILLOW WHIPS AND COTTONWOOD POLES USED FOR POLE PLANTING SHOULD BE HARVESTED WHILE DORMANT, BEFORE BUDS BREAK WINTER DORMANCY, AND PLANTED IN LATE WINTER / EARLY SPRING.
  2. WHIPS OR POLES SHOULD BE HARVESTED LOCALLY, INSOFAR AS POSSIBLE, FROM APPROVED SOURCE.
  3. SECONDARY BRANCHES SHOULD BE REMOVED FROM POLE PORTION TO BE PLACED BELOW GRADE.
  4. AFTER HARVESTING, WHIPS SHOULD BE KEPT MOIST BY PLACING ENDS IN WATER AT ALL TIMES EXCEPT DURING TRANSPORT.
  5. AT LEAST 3/4 OF STEM SHOULD BE BURIED BELOW GRADE, WITH LARGER END FACING DOWNWARD.
  6. "SUPER THRIVE" ROOT STIMULATOR (OR APPROVED EQUAL) SHOULD BE APPLIED TO BURIED END OF POLE PRIOR TO BACKFILLING.
  7. ENSURE THAT AUGERED PLANTING HOLE EXTENDS INTO DAMP SUBSOIL.



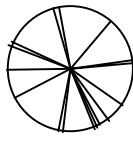

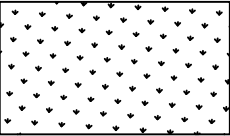
William J. Miller Engineers, Inc. 1511 Third St., Santa Fe, NM 87505			
REVEGETATION PLAN - AREAS 1-4			
City of Santa Fe SANTA FE RIVER FLOOD DAMAGE REPAIR RICARDO BRIDGE TO DON JOSE OUTFALL			
Designed By: RMO	Checked By: RMO	Project Number: 19060	Sheet: 11 of 17
Drawn By: WF	Date: June 28, 2019		





PLAN - AREA 5  
SCALE: 1" = 5'

LEGEND

-  COTTONWOOD POLE PLANTING
-  WILLOW WHIP POLE PLANTINGS
-  NMDOT CLASS "C" NATIVE REVEGETATION SEEDING (SEE REVEGETATION NOTES)

REVEGETATION NOTE:

ALL AREAS OUTSIDE OF MAIN CHANNEL THAT ARE DISTURBED DURING CONSTRUCTION SHALL BE RESEEDING WITH THE FOLLOWING SEED MIX:

NATIVE SEED TO BE "SANTA FE TRAIL" GRASS BLEND, AS AVAILABLE FROM CURTIS AND CURTIS, CLOVIS, NM (PHONE: 800-753-4644; EMAIL: SEED@CURTISSEED.COM), OR APPROVED EQUIVALENT. SEED BLEND CONSISTS OF THE FOLLOWING:

- BLUE GRAMA
- SIDEOTS GRAMA
- INDIAN RICEGRASS
- WESTERN WHEATGRASS
- BUFFALOGRASS
- ALKALI SACATON
- SHEEP FESCUE
- LITTLE BLUESTEM

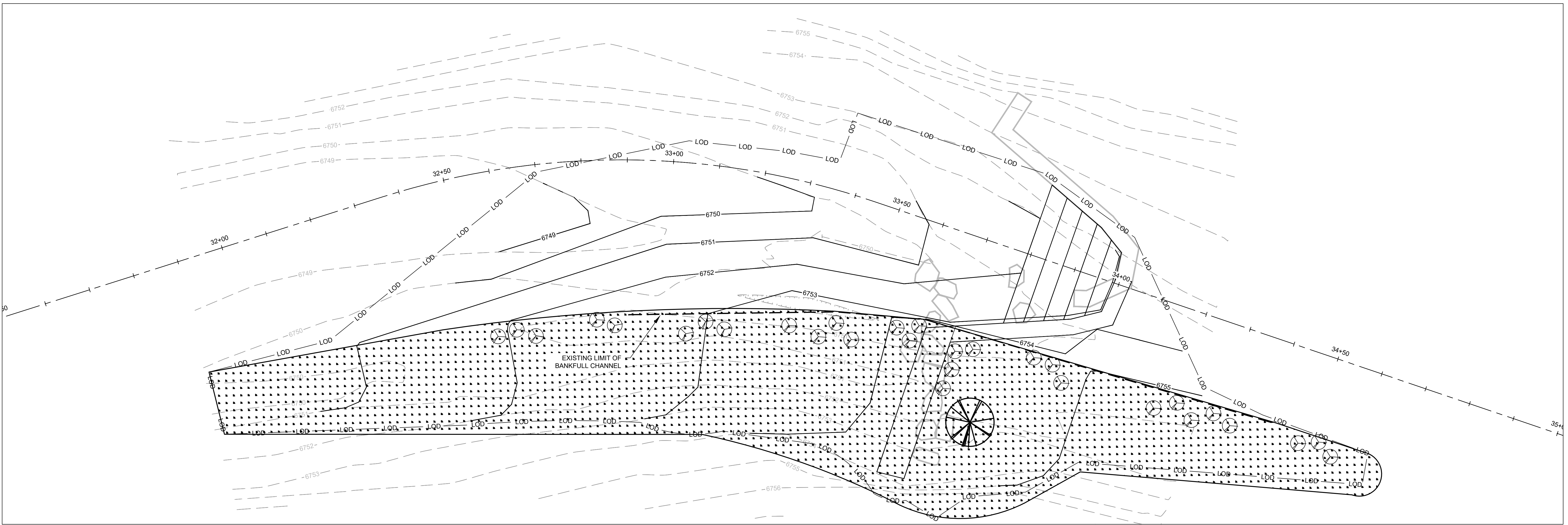
SEEDING RATE TO BE 1 LB PLS/1000 SF

NOTE: ANY AREAS DISTURBED OUTSIDE OF THE LIMITS SHOWN SHALL BE RESEEDING AT THE CONTRACTOR'S EXPENSE FOLLOWING COMPLETION OF CONSTRUCTION.





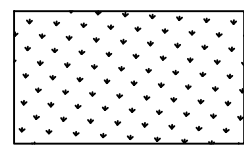
William J. Miller Engineers, Inc. 1511 Third St., Santa Fe, NM 87505			
REVEGETATION PLAN - AREA 5			
City of Santa Fe SANTA FE RIVER FLOOD DAMAGE REPAIR Ricardo Bridge to Don Jose Storm Drain Outfall			
Designed By: RMO	Checked By: RMO	Project Number: 19060	Sheet: 12 of 17
Drawn By: WF	Date: June 28, 2019		





PLAN - AREA 8  
SCALE: 1" = 10'

LEGEND

-  COTTONWOOD POLE PLANTING
-  WILLOW WHIP POLE PLANTINGS
-  NMDOT CLASS "C" NATIVE REVEGETATION SEEDING (SEE REVEGETATION NOTES)

REVEGETATION NOTE:

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BUFFALOGRASS  
ALKALI SACATON  
SHEEP FESCUE  
LITTLE BLUESTEM

SEEDING RATE TO BE 1 LB PLS/1000 SF

NOTE: ANY AREAS DISTURBED OUTSIDE OF THE LIMITS SHOWN SHALL BE RESEEDING AT THE CONTRACTOR'S EXPENSE FOLLOWING COMPLETION OF CONSTRUCTION.

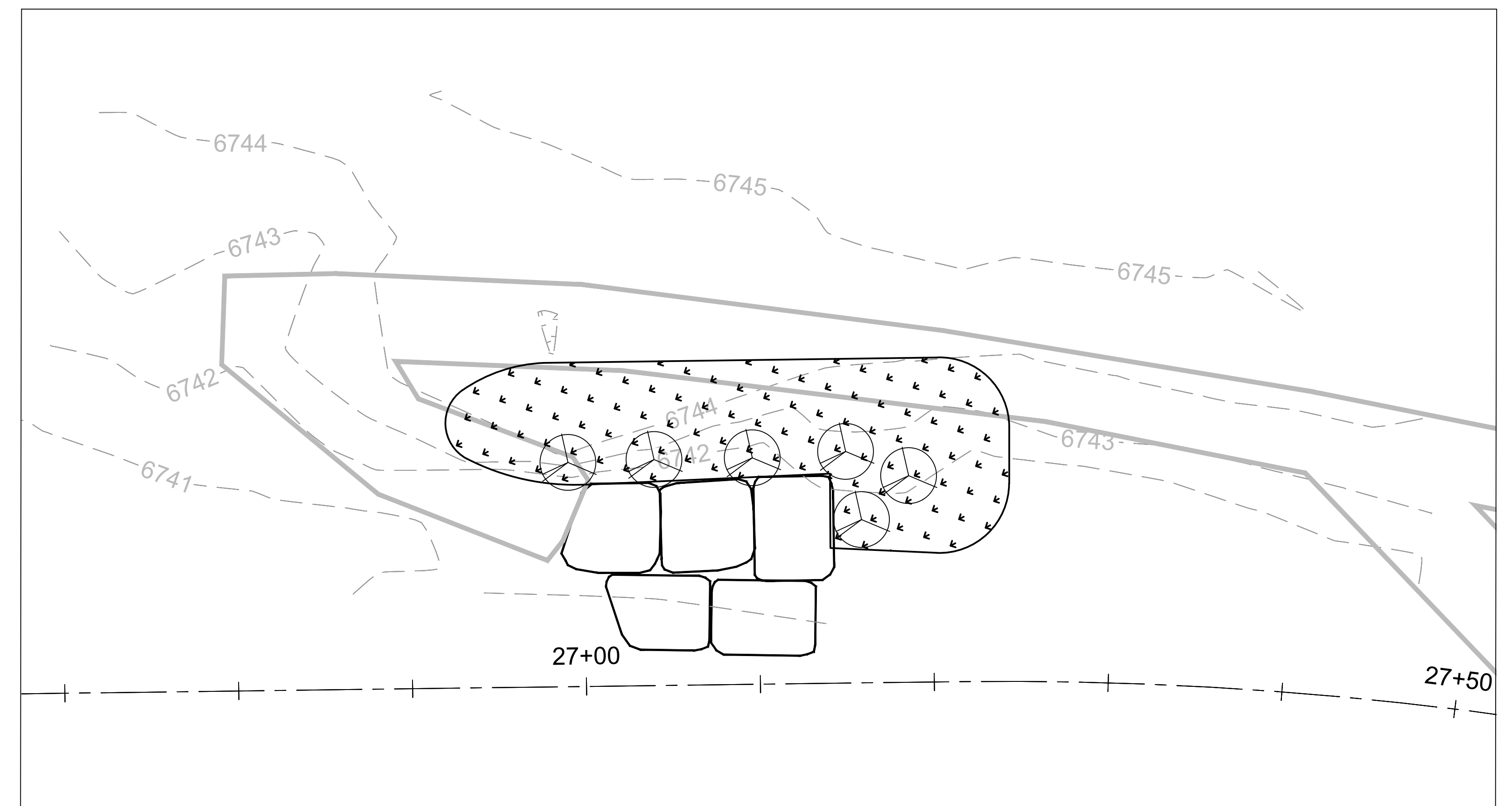
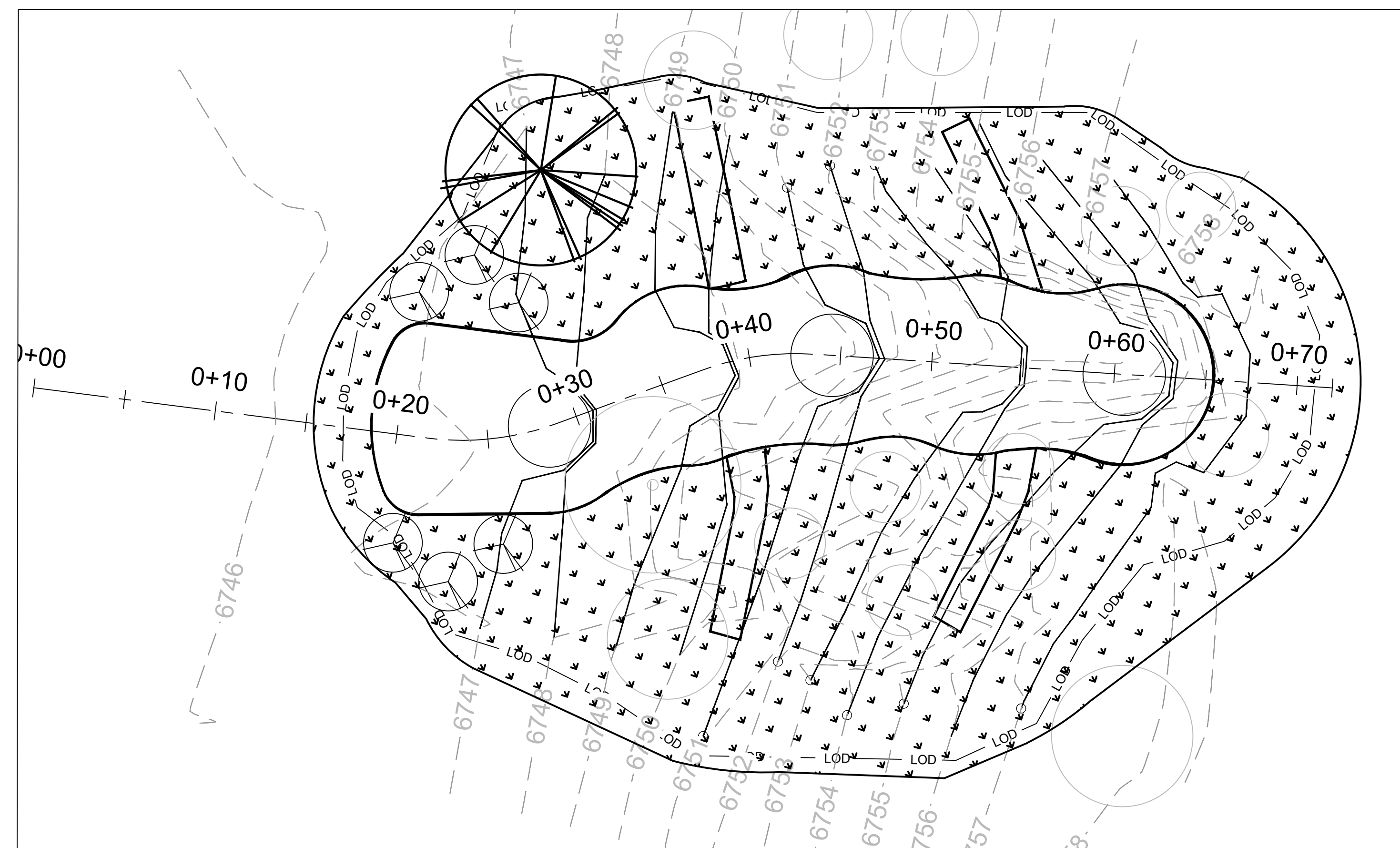


William J. Miller Engineers, Inc. 1511 Third St., Santa Fe, NM 87505			
REVEGETATION PLAN - AREA 8			
City of Santa Fe SANTA FE RIVER FLOOD DAMAGE REPAIR Ricardo Bridge to Don Jose Storm Drain Outfall			
Designed By: RMO	Checked By: RMO	Project Number: 19060	Sheet: 13 of 17
Drawn By: WF	Date: June 28, 2019		

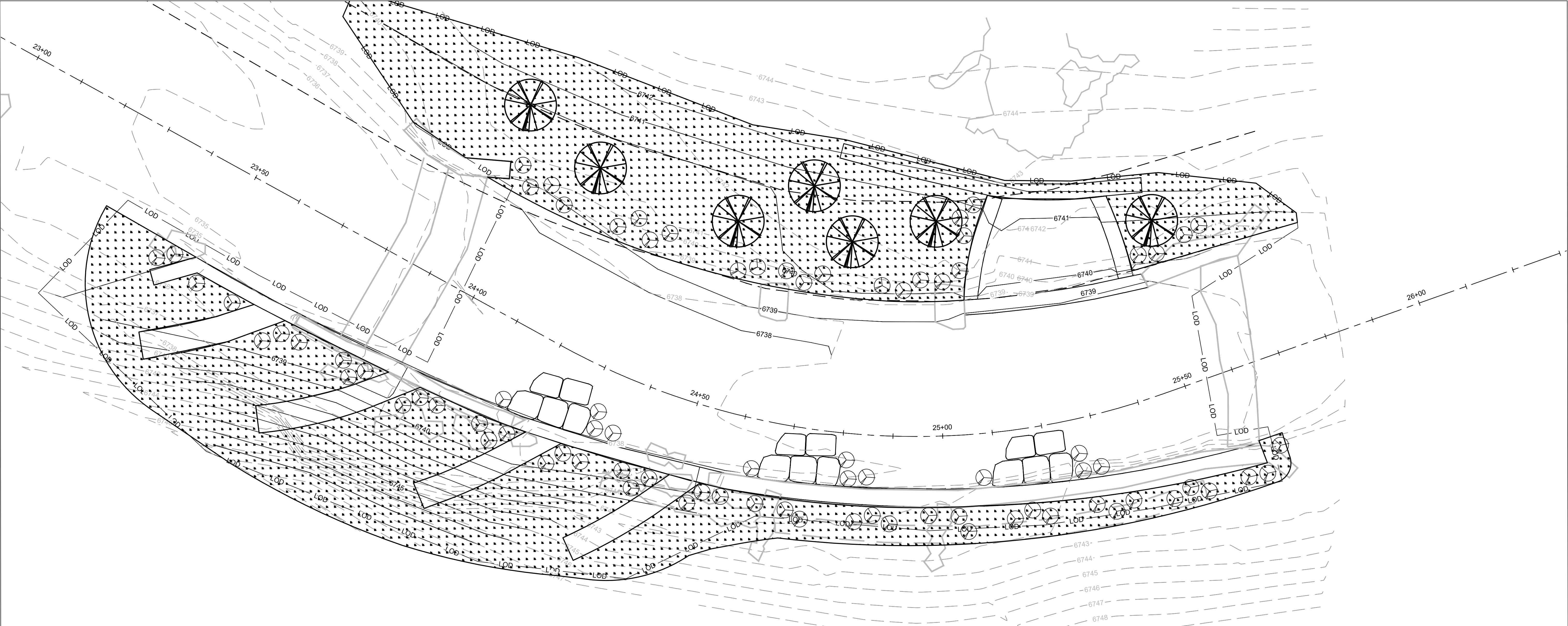






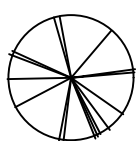
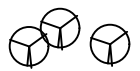
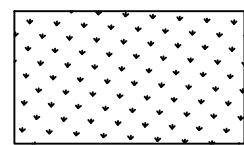






PLAN - AREA 12  
SCALE: 1" = 10'

LEGEND

-  COTTONWOOD POLE PLANTING
-  WILLOW WHIP POLE PLANTINGS
-  NMDOT CLASS "C" NATIVE REVEGETATION SEEDING (SEE REVEGETATION NOTES)

REVEGETATION NOTE:

ALL AREAS OUTSIDE OF MAIN CHANNEL THAT ARE DISTURBED DURING CONSTRUCTION SHALL BE RESEED WITH THE FOLLOWING SEED MIX:

NATIVE SEED TO BE "SANTA FE TRAIL" GRASS BLEND, AS AVAILABLE FROM CURTIS AND CURTIS, CLOVIS, NM (PHONE: 800-753-4644; EMAIL: SEED@CURTISSEED.COM), OR APPROVED EQUIVALENT. SEED BLEND CONSISTS OF THE FOLLOWING:

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- SIDEOTS GRAMA
- INDIAN RICEGRASS
- WESTERN WHEATGRASS
- BUFFALOGRASS
- ALKALI SACATON
- SHEEP FESCUE
- LITTLE BLUESTEM


SEEDING RATE TO BE 1 LB PLS/1000 SF

NOTE: ANY AREAS DISTURBED OUTSIDE OF THE LIMITS SHOWN SHALL BE RESEED AT THE CONTRACTOR'S EXPENSE FOLLOWING COMPLETION OF CONSTRUCTION.



William J. Miller Engineers, Inc. 1511 Third St., Santa Fe, NM 87505			
REVEGETATION PLAN - AREA 12			
City of Santa Fe SANTA FE RIVER FLOOD DAMAGE REPAIR Ricardo Bridge to Don Jose Storm Drain Outfall			
Designed By: RMO	Checked By: RMO	Project Number: 19060	Sheet: 16 of 17
Drawn By: WF	Date: June 28, 2019		





BILL RICHARDSON

Governor


DIANE DENISH

Lieutenant Governor

NEW MEXICO

ENVIRONMENT DEPARTMENT

Surface Water Quality Bureau



BEN CURRY

Secretary

SARAH COTTRELL

Deputy Secretary

RECEIVED

JUN 29 2010

ENGINEERING DIVISION

Harold Runnels Building, N2050

1190 South St. Francis Drive

P.O. Box 5469, Santa Fe, NM 87502

Phone (505) 827-0187 Fax (505) 827-0160

www.nmenv.state.nm.us

June 24, 2010

CERTIFIED MAIL NO. 7008 1830 0003 4174 5623

Mr. Brian K. Drypolcher  
City of Santa Fe, Watershed and Trails Section, Engineering Division  
POB 909  
Santa Fe, New Mexico 87504-0909

Subject: Clean Water Act Section 401 Water Quality Certification for NMED SWQB File SF-507:  
Santa Fe River Restoration, Santa Fe County, New Mexico.

Dear Mr. Drypolcher,

The Surface Water Quality Bureau (SWQB) of the New Mexico Environment Department has examined the application for the project indicated above under Sections 404 and 401 of the federal Clean Water Act. According to the application, this project involves installing trails, channel and bank stabilization, and revegetation along at the Santa Fe River between Camino Alire and Camino Carlos Real. Gannett Fleming West, Inc. is acting as agent on your behalf.

The U.S. Army Corps of Engineers (USACE) will regulate this project under Nationwide Permit NW-27 (USACE Action SPA-2009-00765 -ABQ). A state Water Quality Certification is required by Section 401 of the federal Clean Water Act to ensure that the project complies with the State of New Mexico water quality standards (State of New Mexico, Standards for Interstate & Intrastate Surface Waters, New Mexico Water Quality Control Commission, 20.6.4 New Mexico Administrative Code (NMAC) amendments effective on August 1, 2007). A Section 401 Water Quality Certification is also required to comply with General Condition 21 (Water Quality) and General Condition 23 (Regional and Case-By-Case Conditions) of the Nationwide Permits.

The State of New Mexico water quality standards applicable to the project, which are available on the web at <http://www.nmcpr.state.nm.us/nmac/parts/title20/20.006.0004.pdf> include, but are not limited to:

- 20.6.4.8
- 20.6.4.13 A, B, F, I
- 20.6.4.13.J
- Antidegradation Policy and Implementation Plan
- General Criteria for Bottom Deposits and Suspended or Settleeable Solids, Floating Solids, Oil and Grease, Toxic Pollutants, Temperature, and Turbidity
- Turbidity attributable to other than natural causes shall not reduce light transmission to the point that the normal growth, function or reproduction of aquatic life is impaired or that will cause substantial visible contrast with the natural appearance of the water. Turbidity shall not exceed 10 NTU over background turbidity when the background turbidity is 50 NTU or less, or increase more than 20 percent when the background turbidity is more than 50

NTU. Background turbidity shall be measured at a point immediately upstream of the turbidity-causing activity. However, limited-duration activities necessary to accommodate dredging, construction or other similar activities and that cause the criterion to be exceeded may be authorized provided all practicable turbidity control techniques have been applied and all appropriate permits and approvals have been obtained.

All intermittent surface waters of the state...

Standards Applicable to Attainable or Designated Uses

According to the State of New Mexico water quality standards, the Santa Fe River (Santa Fe WWTP to Nichols Reservoir) is designated for the following uses: livestock watering, wildlife habitat, limited aquatic life and secondary contact. "Surface water(s) of the state" means all surface waters including streams, mudflats, sandflats, wetlands, sloughs, wet meadows, and natural ponds. The Santa Fe River (Santa Fe WWTP to Nichols Reservoir) does not meet State of New Mexico water quality standards for aquatic life, primary contact, or wildlife habitat (2008 - 2010 CWA §303(d)/§305(b) Integrated Report and List of Assessed Surface Waters).

Section 401 Water Quality Certification with Conditions:

Pursuant to Section 401 of the Clean Water Act and 40 Code of Federal Regulations Part 121, the SWQB hereby issues a conditional Section 401 Water Quality Certification for USACE Action SPA-2009-00765 -ABQ (Santa Fe River Restoration) based on the application and/or information provided. This certification is subject to conditions to reasonably assure that the activity is consistent with state law, will be conducted in a manner that will not violate applicable State of New Mexico water quality standards, and implements the Water Quality Management Plan, including Total Maximum Daily Loads (TMDLs), the Continuing Planning Process, and Antidegradation Policy Implementation Plan. Therefore, this Certification is not valid unless the following conditions are adhered to:

1. Erosion control measures for all portions of the project area that drain to or would have runoff toward surface water must be properly selected, installed, inspected, repaired, and maintained. Erosion and sediment control structures (e.g., silt fences, sediment basins, etc.) must be inspected after significant storm events and repaired as necessary. Sediment must be removed from erosion control structures when the sediment reaches one-half the height of the structure or wet storage volume is reduced by one-half.
2. Fuel, oil, hydraulic fluid, lubricants, and other petrochemicals must not be stored within the 100-year floodplain and must have a secondary containment system to prevent spills. Appropriate spill clean-up materials such as booms and absorbent pads must be available on-site at all times during construction.
3. All heavy equipment used in the project area must be pressure washed and/or steam cleaned before the start of the project and inspected daily for leaks. A written log of inspections and maintenance must be completed. Leaking equipment must not be used in or near surface water. Refuel equipment at least 100 feet from surface water.
4. Do not work within the channel during spring runoff or summer monsoon seasons. Local weather forecasts must be monitored to avoid working in high water. Releases from dams must be incorporated into the work schedule to avoid working in high water. Work in the stream channel should be limited to periods of no flow when practicable, and must be limited to periods of low flow.
5. Temporary crossings must be restricted to a single location and perpendicular to and at a narrow point of the channel to minimize disturbance. Heavy equipment must be operated from the bank or work platforms and not enter surface water when practicable. Heavy equipment must not be parked within

the stream channel. Heavy equipment that is operated from within flowing water must be appropriate for such work and properly maintained.

6. Flowing water must be temporarily diverted around the work area, but remain within the existing channel to minimize erosion and turbidity and to provide for aquatic life movement. Diversion structures must be non-erodible, such as sand bags, water bladders, concrete barriers, or channel lined with geotextile or plastic sheeting. Dirt cofferdams are not acceptable diversion structures. Diversion structures must be capable of carrying anticipated stream flows during the construction period. All man-made materials must be removed from the diversion channel and water returned to the original channel in a manner that avoids or minimizes turbidity. Temporary diversion channels must be backfilled in a manner that prevents erosion and diversion of the stream from its natural channel.
7. Any asphalt, concrete, or other construction materials must be properly handled and contained to prevent releases to surface water. Poured concrete must be fully contained in mortar-tight forms and/or placed behind non-erodible cofferdams to prevent releases to surface water or ground water. Appropriate measures must be used to prevent wastewater from concrete batching, vehicle wash-down, or aggregate processing entering the watercourse. Dumping of waste materials near watercourses is strictly prohibited.
8. Work or the use of heavy equipment in wetlands must be avoided or minimized unless the impacts are to be mitigated.
9. In-channel structures must be properly designed, installed and maintained to allow passage of sediment, bedload, and woody debris, and to prevent erosion problems or diversion of the stream from its natural channel.
10. All areas adjacent to the watercourse that are disturbed because of the project, including temporary access roads, stockpiles and staging areas, must be restored to pre-project elevations. Disturbed areas outside the channel that are not otherwise physically protected from erosion must be reseeded or planted with native vegetation. Stabilization measures including vegetation are required at the earliest practicable date, but by the end of first full growing season following construction. Native woody riparian and/or wetland species must be used in areas that support such vegetation. Plantings must be monitored and replaced for an overall survival rate of at least 80 percent. Once established, native plants adapted to the site must be able to thrive with no supplemental water or treatment.
11. You are required to submit an annual monitoring report documenting the monitoring discussed below for a period of not-less-than five years.

a. You shall take photographs of not less than ten locations adjacent to structures installed to determine the efficacy of the structure. Include the project's largest structures, especially those that cross the entire stream channel. The same locations shall be photographed annually and displayed in the monitoring report. Changes shall be prominently noted, both in the report text and annotated in the photo captions.

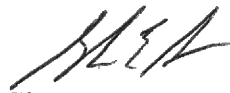
b. You shall include a discussion of peak flows during spring and monsoon peak events, the installed structures' response to high flows, and the progress of post-construction stabilization, including the revegetation success. This discussion should be cumulative from year to year to enable the reader to obtain an overall understanding of the structures' efficacy since installation.
12. A copy of this Section 401 Water Quality Certification must be kept at the project site during all phases of construction. All contractors involved in the project must be provided a copy of this certification and made aware of the conditions prior to starting construction.

13. The SWQB must be notified at least five days before starting construction to allow time to schedule monitoring or inspections.
14. Report all spills immediately to the NMED as required by the New Mexico Water Quality Control Commission regulations (20.6.2.1203 NMAC). For non-emergencies during normal business hours, call 505-428-2500. For non-emergencies after hours, call 866-428-6535 or 505-428-6535 (voice mail, twenty-four hours a day). For emergencies only, call 505-827-9329 twenty-four hours a day (New Mexico Department of Public Safety).

Violations of State of New Mexico water quality standards could lead to penalties under the New Mexico Water Quality Act. Section 74-6-10.1 B of the Act states, "Any person who violates any provision of the New Mexico Water Quality Act other than Section 74-6-5 NMSA 1978 or any person who violates any regulation, water quality standard, or compliance order adopted pursuant to that act shall be assessed civil penalties up to the amount of ten thousand dollars (\$10,000) per day for each violation."


The SWQB specifically reserves the right to amend or revoke this conditional Section 401 Certification at any time to ensure compliance with the State of New Mexico water quality standards. If you have any questions regarding this Section 401 Water Quality Certification, please feel free to contact Neal Schaeffer of my staff at (505) 476-3017. Thank you for your cooperation.

Sincerely,

  
Glenn Saums, Acting Chief  
Surface Water Quality Bureau

GS: cns

xc: NMED District II Manager, Santa Fe  
Deanna Cummings, U.S. Army Corps of Engineers  
Tom Nystrom, Wetlands, Region 6, USEPA  
Jill Wick, New Mexico Department of Game and Fish  
Brian Millsap, U.S. Fish and Wildlife Service  
401 Certification File SF-507



william j. miller  
ENGINEERS

William J. Miller Engineers, Inc.  
1511 Third St.,  
Santa Fe, NM 87505

PERMITS

City of Santa Fe  
SANTA FE RIVER  
FLOOD DAMAGE REPAIR  
Ricardo Bridge to Don Jose Storm Drain Outfall

Designed By:  
JMC

Checked By:  
WJM

Project Number:  
19060

Drawn By:  
JMC

Date:  
June 28, 2019

Sheet:  
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