CITY OF ALBUQUERQUE
PLANNING DEPARTMENT – Development Review Services

1706

Richard J. Berry, Mayor

January 15, 2016

J. Graeme Means, P.E.
High Mesa Consulting Group
6010-B Midway Park Blvd NE
Albuquerque, NM 87109

RE: Onate E.S. Classroom Building
Grading and Drainage Plan
Engineer's Stamp Date 11-19-2015 (File: H22D035)

Dear Mr. Means:

Based upon the information provided in your submittal received 11-20-15, the above referenced Plan is approved for Building Permit.

Please attach a copy of the approved Grading Plan in the construction sets when submitting for a building permit.

Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required. If you have any questions, you can contact me at 924-3695.

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

Sincerely,

Rita Harmon, P.E.
Senior Engineer, Planning Dept.
Development Review Services

Orig: Drainage file
c.pdf: via Email

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: ONATE E.S. CLASSROOM BUILDING Building Permit #: _____ City Drainage #: H22/DO35
DRB#: _____ EPC#: _____ Work Order#: _____
Legal Description: TRACT A. ONATE ELEMENTARY SCHOOL
City Address: 12415 Brentwood Hills NE, Albuquerque NM 87112

Engineering Firm: High Mesa Consulting Group Contact: Graeme Means #13676
Address: 6010 - B Midway Park Blvd. NE, Albuquerque NM 87109
Phone#: 505-345-4250 Fax#: 505-345-4254 E-mail: gmeans@highmesacg.com

Owner: Albuquerque Public Schools Contact: Arichitect
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

Architect: Studio Southwest Architects, INC Contact: Richard T. Braun
Address: 2101 Mountain Road NW, Albuquerque NM 87104
Phone#: 505-843-9636 Fax#: 505-843-9683 E-mail: rbraun@studioswarch.com

Other Contact: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

Check all that Apply:

DEPARTMENT:
x HYDROLOGY/ DRAINAGE
_____ TRAFFIC/ TRANSPORTATION
_____ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:
_____ ENGINEER/ ARCHITECT CERTIFICATION

_____ CONCEPTUAL G & D PLAN
_____ GRADING PLAN
_____ DRAINAGE MASTER PLAN
_____ DRAINAGE REPORT
_____ CLOMR/LOMR

_____ TRAFFIC CIRCULATION LAYOUT (TCL)
_____ TRAFFIC IMPACT STUDY (TIS)
_____ EROSION & SEDIMENT CONTROL PLAN (ESC)

_____ OTHER (SPECIFY) _____

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:
X BUILDING PERMIT APPROVAL
_____ CERTIFICATE OF OCCUPANCY

_____ PRELIMINARY PLAT APPROVAL
_____ SITE PLAN FOR SUB'D APPROVAL
_____ SITE PLAN FOR BLDG. PERMIT APPROVAL
_____ FINAL PLAT APPROVAL
_____ SIA/ RELEASE OF FINANCIAL GUARANTEE
_____ FOUNDATION PERMIT APPROVAL
_____ GRADING PERMIT APPROVAL
_____ SO-19 APPROVAL
_____ PAVING PERMIT APPROVAL
_____ GRADING/ PAD CERTIFICATION
_____ WORK ORDER APPROVAL
_____ CLOMR/LOMR

_____ PRE-DESIGN MEETING
_____ OTHER (SPECIFY) _____

IS THIS A RESUBMITTAL?: _____ Yes X No

DATE SUBMITTED: 11/20/2015 By: Graeme Means

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: ___

11/19/2015 3:01 PM

DRAINAGE PLAN

I. INTRODUCTION AND EXECUTIVE SUMMARY

THIS PROJECT, LOCATED IN THE FOOTHILLS AREA OF THE ALBUQUERQUE METROPOLITAN AREA, REPRESENTS A MODIFICATION TO AN EXISTING SITE WITHIN AN INFILL AREA. THE SITE IS LOCATED ON THE NORTH SIDE OF BRENTWOOD HILLS BLED NE, EAST OF CHARLWOOD PARK BLVD. NE. THE PROPOSED IMPROVEMENTS CONSIST OF A NEW FREE–STANDING CLASSROOM BUILDING NEAR THE EAST END OF THE SITE. AT PRESENT, THE SITE GENERALLY DRAINS FROM EAST TO WEST AND EXHIBITS SIGNIFICANT TOPOGRAPHIC RELIEF ON THE WEST SIDE OF THE BUILDING SITE. ALL RUNOFF IS VIA SURFACE FLOW AND THERE ARE NO PUBLIC STORM DRAINS IN THE SITE OR ADJACENT CITY STREET. DUE TO THE INFILL STATUS, THE CONTINUED FREE DISCHARGE OF ONSITE RUNOFF TO THE ADJACENT STREET WILL BE MAINTAINED AND HAS BEEN ESTABLISHED BY PRIOR PLANS. DEVELOPED RUNOFF FROM MOST OF THE NEW BUILDING'S ROOF AREA WILL DISCHARGE DIRECTLY TO THE EAST TO AN EXISTING EMERGENCY ACCESS ROAD THAT WAS CONSTRUCTED WITH THE MOST RECENT PREVIOUS PHASE OF DEVELOPMENT WHICH DISCHARGES DIRECTLY TO THE ADJACENT PUBLIC STREET. THIS PLAN IS SUBMITTED FOR BUILDING PERMIT APPROVAL FOR THE PROPOSED NEW CLASSROOM BUILDING AT THE EAST END OF THE SITE.

II. PROJECT DESCRIPTION

AS SHOWN BY THE CITY ZONE ATLAS PAGE H–22, THE SITE LIES ON NORTH SIDE OF BRENTWOOD HILLS BLVD NE, EAST OF CHELWOOD PARK BLVD. NE. THE PROPERTIES TO THE SOUTH, EAST AND NORTH ARE SINGLE FAMILY RESIDENCES. THE SITE TO THE WEST IS A PUBLIC CITY PARK. THE SITE WAS PLATTED A FEW YEARS AGO AS PART OF THE PREVIOUS PHASES OF DEVELOPMENT. THE LEGAL DESCRIPTION OF THE SITE IS TRACT A, ONATE ELEMENTARY SCHOOL. AS INDICATED BY PANEL 357 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS PUBLISHED BY FEMA FOR BERNALILLO COUNTY, NEW MEXICO, AUGUST 16, 2012, THIS SITE DOES NOT LIE WITHIN A DESIGNATED FLOOD HAZARD ZONE. THE NEAREST FLOOD HAZARD ZONE LIES ½ MILE DOWNSTREAM OF THE SITE IS AT THE INTERSECTION OF BRENTWOOD HILLS BLVD NE AND JUAN TABO BLVD NE.

III. BACKGROUND DOCUMENTS & RESEARCH

THE FOLLOWING DOCUMENTS WERE REVIEWED AND REFERENCED IN THE PREPARATION OF THIS DRAINAGE NARRATIVE:

A. GRADING AND DRAINAGE PLAN – ONATE ELEMENTARY SCHOOL DATED 12–30–1983 BY HIGH MESA CONSULTING GROUP (FORMERLY TOM MANN & ASSOCIATES). THIS GRADING PLAN SUPPORTED CONSTRUCTION OF THE GYMNASIUM BUILDING. THIS PLAN IDENTIFIED THE SITE DRAINAGE PATTERNS THAT STILL EXIST TODAY WHEREBY THE NORTHERN PORTION OF THE SITE HAS A GRADED FLOWLINE RUNNING FROM EAST TO WEST TO THE NORTHWEST CORNER OF THE SITE WHERE IT IS FORCED TO TURN SOUTH BY A CURB LOCATED AT THE WEST EDGE OF THE SITE AND GRADUALLY FLOW SOUTH TO THE STREET.

B. ONATE ELEMENTARY SCHOOL DRAINAGE STUDY DATED 04–22–1992, CITY HYDROLOGY FILE H22/D035, BY HIGH MESA CONSULTING GROUP (FORMERLY JEFF MORTENSEN & ASSOCIATES) AND UPDATED 01–04–1994. THIS STUDY IDENTIFIED SEVERAL SITE AREAS WHERE POORLY DEFINED DRAINAGE PATTERNS RESULTED IN AREAS OF EROSION AND STANDING WATER WHICH RESULTED IN SITE MAINTENANCE AND PEDESTRIAN ACCESS PROBLEMS. RECOMMENDATIONS WERE PRESENTED AND PHASE I OF THE IMPROVEMENTS INCLUDED CONSTRUCTION OF A NEW PAVED TRACK AT THE WEST END OF THE SITE THAT ALSO SERVES AS A DRAINAGE CONVEYANCE TO CARRY SITE FLOWS SOUTH TO BRENTWOOD HILLS VIA NEW SIDEWALK CULVERTS CONSTRUCTED AS PART OF THE PHASE I PROJECT.

C. GRADING AND DRAINAGE PLAN – ONATE ELEMENTARY SCHOOL KITCHEN DATED 01–31–2001, CITY HYDROLOGY FILE H22/D035, BY HIGH MESA CONSULTING GROUP (FORMERLY JEFF MORTENSEN & ASSOCIATES). THIS PLAN SUPPORTED AN ADDITION TO THE KITCHEN. IT REFERENCES AND CONFORMS TO THE PREVIOUSLY APPROVED PLANS.

D. CONSTRUCTION PLANS FOR ONATE ELEMENTARY SCHOOL ACCESS IMPROVEMENTS DATED 4–26–2007 BY HIGH MESA CONSULTING GROUP (FORMERLY JEFF MORTENSEN & ASSOCIATES). THIS PLAN SET DESIGNED THREE IMPROVEMENTS BID LOTS OF WHICH TWO WERE CONSTRUCTED. THE NEW IMPROVEMENTS INCLUDED A DRIVEPAD FOR SERVICE ACCESS TO THE PLAYGROUND, DRAINAGE AND EROSION CONTROL WORK ON THE WEST SIDE OF THE NORTHWESTERNMOST BUILDING, AND ALSO ADA ACCESS IMPROVEMENTS FROM THE CENTER OF THE CAMPUS TO THE PLAYGROUND / FIELD AREA. THE THIRD BID LOT WAS DESIGNED TO PROVIDE ADA ACCESS AND DRAINAGE IMPROVEMENTS IN THE SLOPED TRANSITION AREA EAST OF THE MAIN BUILDING AND WEST OF THE PORTABLE CLASSROOM AREA. THIS PROJECT INCLUDED CONSTRUCTION OF A CONCRETE RUNDOWN CHANNEL THAT FLOWS FROM NORTH TO SOUTH ALONG THE EAST EDGE OF THE EXISTING MAIN CLASSROOM BUILDING. THIS RUNDOWN CHANNEL IS THE PROGRAMMED OUTFALL FOR RUNOFF FORM THE CURRENTLY PROPOSED CLASSROOM BUILDING.

E. ONATE ELEMENTARY SCHOOL PRIVATE FIRE ROAD AND ACCESS IMPROVEMENTS DATED 03/15/2010, CITY HYDROLOGY FILE H22/D035, ENGINEER'S CERTIFICATION DATED 12/01/2010. THIS PLAN SET INCLUDED THE THIRD BID LOT IMPROVEMENTS IDENTIFIED BY THE AFOREMENTIONED ACCESS IMPROVEMENTS PLAN SET (REFERENCE D), AND ALSO A NEW PERIMETER EMERGENCY ACCESS ROAD THAT ALSO SERVED TO IMPROVE INTERNAL SITE DRAINAGE AND ELIMINATE PREVIOUS EROSION PROBLEMS. THESE IMPROVEMENTS WERE CONSTRUCTED TO SUPPORT THE NEW KINDERGARTEN CLASSROOM BUILDING THAT IS CURRENTLY UNDER CONSTRUCTION.

F. GRADING AND DRAINAGE PLAN – ONATE ELEMENTARY SCHOOL KINDERGARTEN CLASSROOM DATED 6/17/2010 (H–22/D035) BY HIGH MESA CONSULTING GROUP. THIS PLAN WAS PREPARED AND SUBMITTED TO SUPPORT CONSTRUCTION OF A NEW KINDERGARTEN CLASSROOM BUILDING, IMMEDIATELY TO THE NORTH OF THE CURRENTLY PROPOSED CLASSROOM BUILDING. THIS PROJECT IS CURRENTLY UNDER CONSTRUCTION.

IV. EXISTING CONDITIONS

AT PRESENT, THE SITE IS DEVELOPED IS AN ACTIVE ELEMENTARY SCHOOL SITE CONTAINING PERMANENT AND PORTABLE BUILDINGS ALONG WITH PAVED PARKING, PLAYGROUND AND FIELD IMPROVEMENTS, AND LANDSCAPING. THE SITE GENERALLY SLOPES FROM NORTHEAST TO SOUTHWEST DISCHARGING RUNOFF TO THE ADJACENT CITY STREET, BRENTWOOD HILLS BLVD NE. NO APPARENT OFFSITE FLOWS ENTER THE SITE FROM THE RESIDENTIAL PROPERTIES THAT SURROUND THE UPHILL (NORTH AND EAST) SIDES OF THE SITE WHICH HAVE BLOCK WALLS PREVENTING RUNOFF FROM IMPACTING THE SITE.

THE NEW CLASSROOM BUILDING PROPOSED HEREIN WILL BE LOCATED AT THE EAST END OF THE SITE WHICH IS THE SITE'S HIGH POINT FROM WHICH DRAINAGE GENERALLY FLOWS FROM EAST TO WEST. THIS SITE PREVIOUSLY CONTAINED PORTABLE CLASSROOMS THAT WERE RELOCATED IN 2010 IN ANTICIPATION OF THIS PROJECT. RUNOFF FROM THIS AREA CURRENTLY DRAINS FROM EAST TO WEST, WHERE IT IS INTERCEPTED BY A CONCRETE RUNDOWN CHANNEL CONSTRUCTED IN 2010 TO SERVE THIS AREA (REFERENCE E) THAT FLOWS FROM NORTH TO SOUTH, TO THE EXISTING PARKING LOT WHICH DRAINS OUT TO BRENTWOOD HILLS BLVD THROUGH THE EXISTING DRIVEPADS.

THERE IS AN EXISTING PAVED PARKING LOT IMMEDIATELY SOUTH OF THE PROPOSED BUILDING SITE. THIS PARKING LOT DRAINS FROM EAST TO WEST WITH RUNOFF DISCHARGING TO BRENTWOOD HILLS BLVD NE VIA EXISTING DRIVEPAD.

V. DEVELOPED CONDITIONS

THE PROPOSED CLASSROOM ADDITION WILL BE LOCATED IN AN AREA THAT PREVIOUSLY HAD PORTABLE CLASSROOMS AND ASSOCIATED PAVED WALKWAYS. THE NEW BUILDING WILL HAVE ROOF DRAINS DISCHARGING THE MAJORITY OF ROOF DRAINAGE DIRECTLY TO THE EAST TO THE EXISTING EMERGENCY ACCESS ROAD WHICH IS PAVED WITH CURB AND GUTTER AND CARRIES RUNOFF TO BRENTWOOD HILLS BLVD. THE BUILDING SITEWORK WILL INCLUDE CONCRETE WALKWAYS, A PLAZA AREA, AND LANDSCAPING IMPROVEMENTS ON THE NORTH AND WEST SIDES OF THE BUILDING. THE NEW BUILDING SITEWORK WILL DRAIN FROM EAST TO WEST TO AN EXISTING SLOPED AREA (5 FT. VERTICAL FALL OVER 20 FT. HORIZONTAL, 5:1 SLOPE) THAT DRAINS DOWN TO THE WEST TO THE EXISTING CONCRETE RUNDOWN CHANNEL THAT DIVERTS RUNOFF TO THE SOUTH. AS DESCRIBED BY THE FOLLOWING, THIS SLOPED AREA WILL BE LANDSCAPED IN A TERRACED MANNER THAT IS DESIGNED TO ACCEPT RUNOFF FORM THE SITE. TWO SMALL ROOF AREAS WILL HAVE PIPED ROOF DRAINS THAT WILL DISCHARGE DIRECTLY TO THIS LANDSCAPED AREA INTENDED TO SATISFY THE INTENT OF WATER QUALITY REQUIREMENTS. THIS PROJECT ALSO INCLUDES RECONSTRUCTION OF THE EXISTING PAVED PARKING LOT SOUTH OF THE BUILDING. THE PARKING LOT WILL CONTINUE TO DRAIN FROM EAST TO WEST, HOWEVER, SITE RUNOFF WILL NOW BE INTERCEPTED BY A PROPOSED STORM INLET THAT WILL DRAIN INTO A WATER QUALITY BASIN LOCATED AT THE SOUTH END OF THE PROPOSED LANDSCAPED AREA.

AS PREVIOUSLY DESCRIBED, THERE IS A 20 FT. WIDE AREA THAT SLOPES DOWN TO THE DRAINAGE RUNDOWN AT A 5:1 SLOPE. THIS SLOPE WILL BE LANDSCAPED AT THE CONCLUSION OF THIS PROJECT WITH A TERRACED CONCEPT INTENDED TO ACCEPT RUNOFF FROM THE NEW PROJECT AND MEET THE INTENT OF WATER QUALITY AND FIRST FLUSH REQUIREMENTS. THERE WILL BE NUMEROUS POCKETS TO RETAIN WATER, AND RUNOFF THAT DOES NOT INFILTRATE OR RETAIN WILL OVERFLOW TO THE EXISTING DRAINAGE RUNDOWN. THIS AREA WILL HAVE NATURAL ROCK RETAINING WALLS AND FLAT STONE PLATING MIXED WITH AREAS OF CRUSHER FINES. DUE TO THE NATURE OF LANDSCAPING IMPROVEMENTS, IT IS DIFFICULT TO QUANTIFY THE PRECISE VOLUME OF RETENTION AND INFILTRATION, HOWEVER, THE PROPOSED SCHEME IS INTENDED TO MEET THE INTENT OF CITY FIRST FLUSH WATER QUALITY REQUIREMENTS. A COPY OF THE LANDSCAPING PLAN WHICH INCLUDES DETAILED GRADING INFORMATION IS PROVIDED HEREWITH FOR INFORMATIONAL PURPOSES.

VI. GRADING PLAN

THE GRADING PLAN SHOWS THE 1.) EXISTING AND PROPOSED GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1'–0" INTERVALS, 2.) THE LIMIT AND CHARACTER OF THE EXISTING AND PROPOSED IMPROVEMENTS, AND 3.) CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES. THE LIMITS OF EXISTING DRAINAGE BASINS SHALL REMAIN THE SAME.

VII. CALCULATIONS

THE CALCULATIONS CONTAINED HEREON ANALYZE THE EXISTING AND DEVELOPED CONDITIONS FOR THE 100–YEAR, 6–HOUR RAINFALL EVENT. THE PROCEDURE FOR 40 ACRE AND SMALLER BASINS, AS SET FORTH IN THE REVISION OF SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA, DATED JANUARY 1993, HAS BEEN USED TO QUANTIFY THE PEAK RATE OF DISCHARGE AND VOLUME OF RUNOFF GENERATED. AS DEMONSTRATED BY THESE CALCULATIONS, THE PROPOSED IMPROVEMENTS WILL RESULT IN A SLIGHT INCREASE (0.4 CFS) IN THE DEVELOPED RUNOFF GENERATED BY THIS PORTION OF THE SITE.

ALTHOUGH THERE WILL BE A SLIGHT INCREASE IN RUNOFF AS COMPARED TO THE EXISTING (BARE SOIL) CONDITION, THE OVERALL NET IMPACT WILL BE OFFSET BY THE FACT THAT THIS AREA WAS MOSTLY IMPERVIOUS PAVING AND PORTABLE CLASSROOM BUILDINGS IN THE PRE–2010 CONDITION. ADDITIONALLY, THERE WILL BE AN UNQUANTIFIED AMOUNT OF RETENTION IN THE TERRACED LANDSCAPING AREA THAT WILL FURTHER REDUCE RUNOFF.

VIII. CONCLUSIONS

THE FOLLOWING CONCLUSIONS HAVE BEEN ESTABLISHED AS A RESULT OF THE EVALUATIONS CONTAINED HEREIN:

1. THE PROPOSED IMPROVEMENTS REPRESENT MODIFICATIONS TO AN EXISTING SITE WITHIN AN INFILL AREA
2. THE PROPOSED IMPROVEMENTS WILL MAINTAIN AND NOT ALTER THE EXISTING DRAINAGE PATTERNS OF THE SITE.
3. THE FREE DISCHARGE OF DEVELOPED RUNOFF TO THE ADJACENT CITY STREETS IS CONSISTENT WITH THE PREVIOUSLY APPROVED PLANS FOR THE SCHOOL SITE.
4. THE PROPOSED IMPROVEMENTS WILL RESULT IN A NEGLIGIBLE GROSS INCREASE IN THE DEVELOPED RUNOFF GENERATED BY THIS SITE THAT WILL BE OFFSET BY LANDSCAPED AREA RETENTION
5. THE PROPOSED IMPROVEMENTS WILL RESULT IN A SLIGHT DECREASE IN THE DEVELOPED RUNOFF AS COMPARED TO PRE–EXISTING CONDITIONS
6. THE PROPOSED IMPROVEMENTS WILL NOT ADVERSELY IMPACT DOWNSTREAM PROPERTIES OR DOWNSTREAM DRAINAGE CONDITIONS.
7. THE PROPOSED IMPROVEMENTS WILL NOT BLOCK POTENTIAL OFFSITE FLOWS

CALCULATIONS

I. SITE CHARACTERISTICS

A. PRECIPITATION ZONE = 4

B. $P_{6,100} = P_{360} =$ 2.90

C. TOTAL PROJECT AREA (A_T) = 26,100 SF
0.60 AC

D. LAND TREATMENTS

1. EXISTING LAND TREATMENT

TREATMENT	AREA (SF/AC)	%
A		
B		
C	16,615 / 0.38	64
D	9,485 / 0.22	36
		100

2. DEVELOPED LAND TREATMENT

TREATMENT	AREA (SF/AC)	%
A		
B		
C	4,950 / 0.11	19
D	21,150 / 0.49	81

II. HYDROLOGY

A. EXISTING CONDITION

a. VOLUME

$E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D)/A_T$

$E_W = ((0.00*0.8) + (0.00*1.08) + (0.38*1.46) + (0.22*2.64))/0.60 =$ 1.89 IN

$V_{100} = (E_W/12)A_T = (1.89/12)0.60 =$ 0.0943 AC-FT = 4,108 CF

b. PEAK DISCHARGE

$Q_P = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$

$Q_P = Q_{100} = ((0.00*2.2) + (0.00*2.92) + (0.38*3.73) + (0.22*5.25)) =$ 2.6 CFS

B. DEVELOPED CONDITION

a. VOLUME

$E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D)/A_T$

$E_W = ((0.00*0.8) + (0.00*1.08) + (0.11*1.46) + (0.49*2.64))/0.60 =$ 2.42 IN

$V_{100} = (E_W/12)A_T = (2.42/12)0.60 =$ 0.1206 AC-FT = 5,255 CF

b. PEAK DISCHARGE

$Q_P = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$

$Q_P = Q_{100} = ((0.00*2.2) + (0.00*2.92) + (0.11*3.73) + (0.49*5.25)) =$ 3.0 CFS

C. COMPARISON

a. VOLUME

$\Delta V_{100} =$ 5255 - 4108 = 1,147 CF (INCREASE)

b. PEAK DISCHARGE

$\Delta Q_{100} =$ 3.0 - 2.6 = 0.4 CFS (INCREASE)

LEGEND

ASPH	ASPHALT
BOH	BUILDING OVERHANG
BW	BLOCK WALL
C&G	CURB AND GUTTER
C/PM	COMMUNICATION LINE BY PAINT MARK
CAM	SECURITY CAMERA
CC	CONCRETE CURB
CDP	CONCRETE DRIVE PAD
CF	LANDSCAPING CRUSHER FINES
CI	CAST IRON PIPE
CLD	CENTERLINE DOOR
CLF	CHAIN LINK FENCE
CLN	CONCRETE LANDING
CND	CONDUIT
CO	CLEANOUT
CONC	CONCRETE
COP	CURB OPENING
CR	CONCRETE RAMP
CRD	CONCRETE RUNDOWN
CRW	CONCRETE RETAINING WALL
CS	CONCRETE STEPS
CSW	CONCRETE SIDEWALK
CW	CONCRETE WALL
DBL	DOUBLE
DYS	PAINTED YELLOW DOUBLE STRIPE
E/PM	ELECTRIC LINE BY PAINT MARK
EA	EDGE OF ASPHALT
FH	FIRE HYDRANT
FL	FLOWLINE
G/PM	GAS LINE BY PAINT MARK
GM	GAS METER WITH PRESSURE REGULATOR VALVE
GS	GAS SERVICE
GVB	METER CAN WITH GAS VALVE
HCS	HANDICAPPED ACCESS SIGN
MC/V	METER CAN WITH BIB VALVE
MH	MANHOLE
MHR	METAL HAND RAIL
MLP	METAL LIGHT POLE ON CONCRETE BASE
MNT	MOUNTABLE
OHM	OVERHEAD MAST
PED	ELECTRIC PEDESTALS
PS	PAINTED PARKING STALL STRIPE
PVC	POLYVINYL CHLORIDE PIPE
PVP	ASPHALT PAVING PATCH
RD	BUILDING ROOF DRAIN
RR	LANDSCAPING RIVER ROCK
SAS	SANITARY SEWER
SAS/PM	SANITARY SEWER LINE BY PAINT MARK
SD	STORM DRAIN
SGP	STEEL GUARD POST
STD	STANDARD
SW	SIDEWALK
SWC	SIDEWALK CULVERT
TA	TOP OF ASPHALT
TC	TOP OF CURB
TCO	TOP OF CONCRETE
TDSW	TURNDOWN SIDEWALK
TG	TOP OF GRATE
TRN	ELECTRIC TRANSFORMER
TS	TRAFFIC SIGN
TW	TOP OF WALL
TYP	TYPICAL
VCP	VITRIFIED CLAY PIPE
W/PM	WATER LINE BY PAINT MARK
WFT	WATER FAUCET
WHB	WATER HOT BOX
WMB	WATER METER BOX
WV	WATER VAULT
WVB	WATER VALVE BOX
*	PAINTED UTILITY MARKER
1.2'ø	TREE TRUNK DIAMETER
✳	CONIFEROUS TREE
✳	SMALL CONIFEROUS TREE
✳	DECIDUOUS TREE
○	SHRUB
⬭	BOULDER RETAINING WALL

INV	INVERT
TA	TOP OF ASPHALT PAVEMENT
TC	TOP OF CURB
TG	TOP OF GRATE
FL	FLOWLINE
+ 20.05	EXISTING SPOT ELEVATION
◕ 14.00	PROPOSED SPOT ELEVATION FOR CURRENT CONSTRUCTION
◕ 14.00	PROPOSED SPOT ELEVATION
◁—— ∘ ∘ ∘	EXISTING FLOWLINE
◀—— • • •	PROPOSED FLOWLINE
– –4920– –	EXISTING CONTOUR
——20——	PROPOSED CONTOUR
◁——	EXISTING DIRECTION OF FLOW
◀——	PROPOSED DIRECTION OF FLOW
▬ - - ▬ - - ▬	RIGHT OF WAY LINE
— — — —	PUBLIC EASEMENT LINE
– – ⇕ – –	HIGH POINT / DIVIDE
——SD——	PROPOSED STORM DRAIN
◍	PROPOSED INFILTRATION PIT
⊛	EXISTING STORM DRAIN MANHOLE
Ծ	EXISTING FIRE HYDRANT
●	PROPOSED FIRE HYDRANT
●	FIRE DEPARTMENT CONNECTION
◌	EXISTING SANITARY SEWER MANHOLE
●	SANITARY SEWER MANHOLE
⋈	EXISTING VALVE BOX
⧓	PROPOSED VALVE BOX
– –⊖⊖– –	EXISTING DOUBLE CLEANOUT
—●●—	PROPOSED DOUBLE CLEANOUT
- - - -⊖- - - -	EXISTING SINGLE CLEANOUT
——●——	PROPOSED SINGLE CLEANOUT
- - - -□- - - -	EXISTING WATER SERVICE
- - - -W- - - -	EXISTING WATER LINE
——W——	PROPOSED WATER LINE
- - -SAS- - -	EXISTING SANITARY SEWER LINE
——SAS——	PROPOSED SANITARY SEWER LINE
- - -F - -P- - -	EXISTING FIRE LINE
——F——P——	PROPOSED FIRE LINE
- - -⋈- - -	EXISTING POST INDICATOR VALVE
——⧓——	PROPOSED POST INDICATOR VALVE
▨	PROPOSED CONCRETE
▨	PROPOSED ASPHALT PAVING
▨	PROPOSED LANDSCAPE AREA
▬▪▬▪▬	PROPOSED RETAINING WALL
▬ ▪ ▪ ▬	PROPOSED BASIN BOUNDARY

WATER LINE CONSTRUCTION NOTES:

1. FOR ALL LINES 12" AND SMALLER, WATER MAIN SHALL BE PVC C–900 DR18 PIPE. DUCTILE IRON IS AN ACCEPTABLE PIPE MATERIAL IN LIEU OF PVC.
2. WATER LINE SHALL HAVE A MINIMUM COVER OF 3'–0" (FINISHED GRADE TO TOP OF PIPE). EXTRA DEPTH TRENCHING, IF REQUIRED, SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.
3. IN ACCORDANCE WITH SECTION 801 OF THE "STANDARD SPECIFICATIONS", METALIZED DETECTABLE WARNING TAPE SHALL BE INSTALLED 18" ABOVE ALL PVC PIPE INSTALLED ON THIS PROJECT.
4. JOINT RESTRAINT SHALL BE CONSIDERED INCIDENTAL TO WATER LINE CONSTRUCTION THEREFORE NO SEPARATE PAYMENT WILL BE MADE.
5. JOINT RESTRAINT SHALL BE PROVIDED ON ALL JOINTS OF FIRE LINES.
6. FOR THE PURPOSES OF THIS PROJECT, ALL RESTRAINED JOINTS AND JOINT RESTRAINT SHALL BE MECHANICALLY RESTRAINED. JOINT RESTRAINT LENGTHS SPECIFIED HEREON ARE THE LENGTHS TO BE RESTRAINED EACH SIDE OF THE FITTING.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING APPROPRIATE MEANS AND METHODS TO EXCAVATE AND TRENCH AND INSTALL PIPE SO AS TO NOT EXCEED RIGHT–OF–WAY OR EASEMENT LIMITS, AND SO AS NOT TO INTERFERE WITH OTHER UTILITIES. THIS SHALL BE CONSIDERED INCIDENTAL TO TRENCHING, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, SUPPORTING AND REPLACING, IF DAMAGED, ALL OTHER UTILITIES ENCOUNTERED DURING CONSTRUCTION. THIS SHALL BE CONSIDERED INCIDENTAL TO TRENCHING, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.
9. NEW WATER LINE INSTALLATIONS SHALL INCLUDE INSULATED 12 GAUGE COPPER TRACER WIRE INSTALLED CONTINUOUSLY ALONG THE PIPE WITH WATER–PROOF SPLICE BOXES AT JUNCTIONS AND TEES. TRACER WIRE SHALL BE ACCESSIBLE AT ALL VALVES, BACKFLOW PREVENTERS AND SERVICES. TRACER WIRE INSTALLATION SHALL BE CONSIDERED INCIDENTAL TO TRENCHING, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.

SANITARY SEWER CONSTRUCTION NOTES:

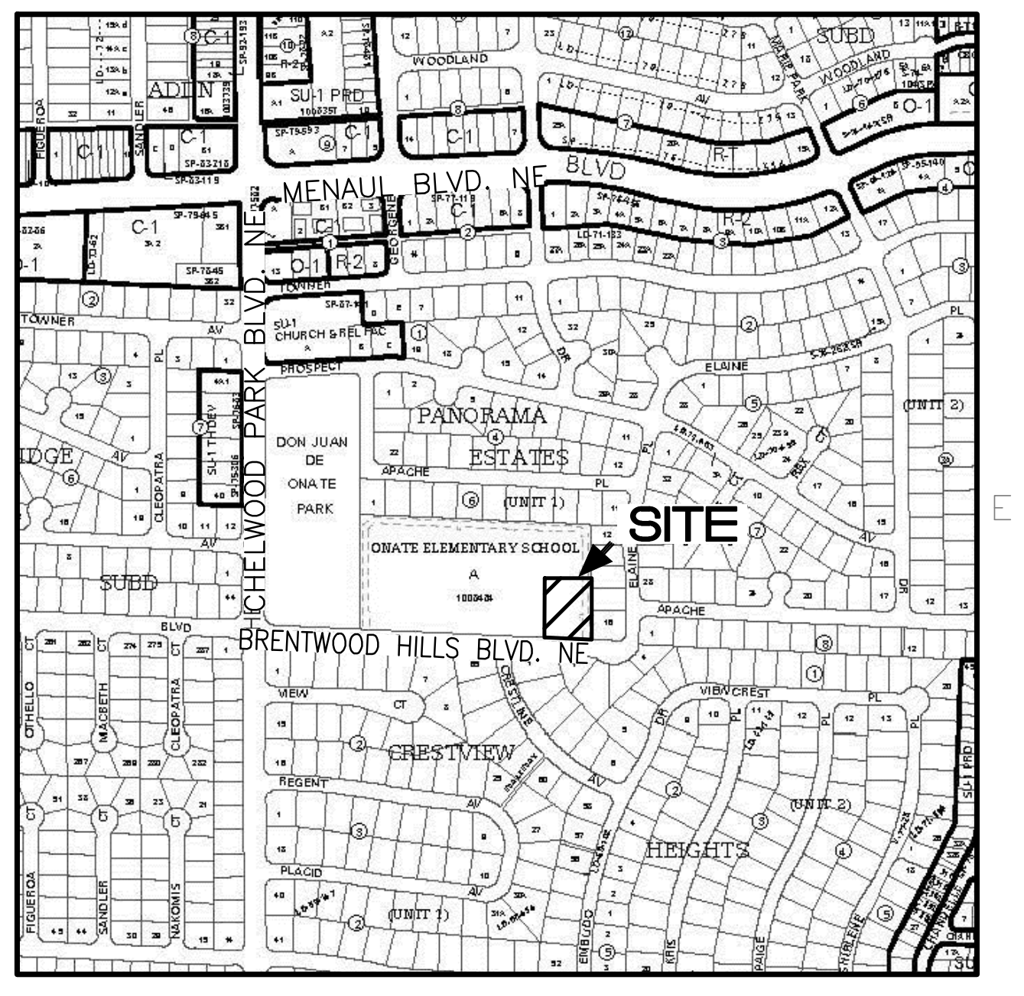
1. ALL SEWER PIPE SHALL BE PVC (DWV).
2. SLOPES SHOWN ARE BASED ON TRUE DISTANCES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING APPROPRIATE MEANS AND METHODS TO EXCAVATE AND TRENCH AND INSTALL PIPE SO AS TO NOT EXCEED RIGHT–OF–WAY OR EASEMENT LIMITS, AND SO AS NOT TO INTERFERE WITH OTHER UTILITIES. THIS SHALL BE CONSIDERED INCIDENTAL TO TRENCHING, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, SUPPORTING AND REPLACING, IF DAMAGED, ALL OTHER UTILITIES ENCOUNTERED DURING CONSTRUCTION. THIS SHALL BE CONSIDERED INCIDENTAL TO TRENCHING, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.
5. NEW SANITARY SEWER LINE INSTALLATIONS SHALL INCLUDE INSULATED 12 GAUGE COPPER TRACER WIRE INSTALLED CONTINUOUSLY ALONG THE PIPE WITH WATER–PROOF SPLICE BOXES AT JUNCTIONS AND TEES. TRACER WIRE SHALL BE ACCESSIBLE AT ALL CLEANOUTS AND SERVICES. TRACER WIRE INSTALLATION SHALL BE CONSIDERED INCIDENTAL TO TRENCHING, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.

NATURAL GAS CONSTRUCTION NOTES:

1. ALL NATURAL GAS LINES SHALL BE INSTALLED USING PIPE AND FITTING MATERIALS PER PLUMBING SPECIFICATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING APPROPRIATE MEANS AND METHODS TO EXCAVATE AND TRENCH AND INSTALL PIPE SO AS TO NOT EXCEED RIGHT–OF–WAY OR EASEMENT LIMITS, AND SO AS NOT TO INTERFERE WITH OTHER UTILITIES. THIS SHALL BE CONSIDERED INCIDENTAL TO TRENCHING, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, SUPPORTING AND REPLACING, IF DAMAGED, ALL OTHER UTILITIES ENCOUNTERED DURING CONSTRUCTION. THIS SHALL BE CONSIDERED INCIDENTAL TO TRENCHING, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.
4. NEW NATURAL GAS INSTALLATIONS SHALL INCLUDE INSULATED 12 GAUGE COPPER TRACER WIRE INSTALLED CONTINUOUSLY ALONG THE PIPE WITH WATER–PROOF SPLICE BOXES AT JUNCTIONS AND TEES. TRACER WIRE SHALL BE ACCESSIBLE AT ALL VALVES AND RISERS. TRACER WIRE INSTALLATION SHALL BE CONSIDERED INCIDENTAL TO TRENCHING, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.

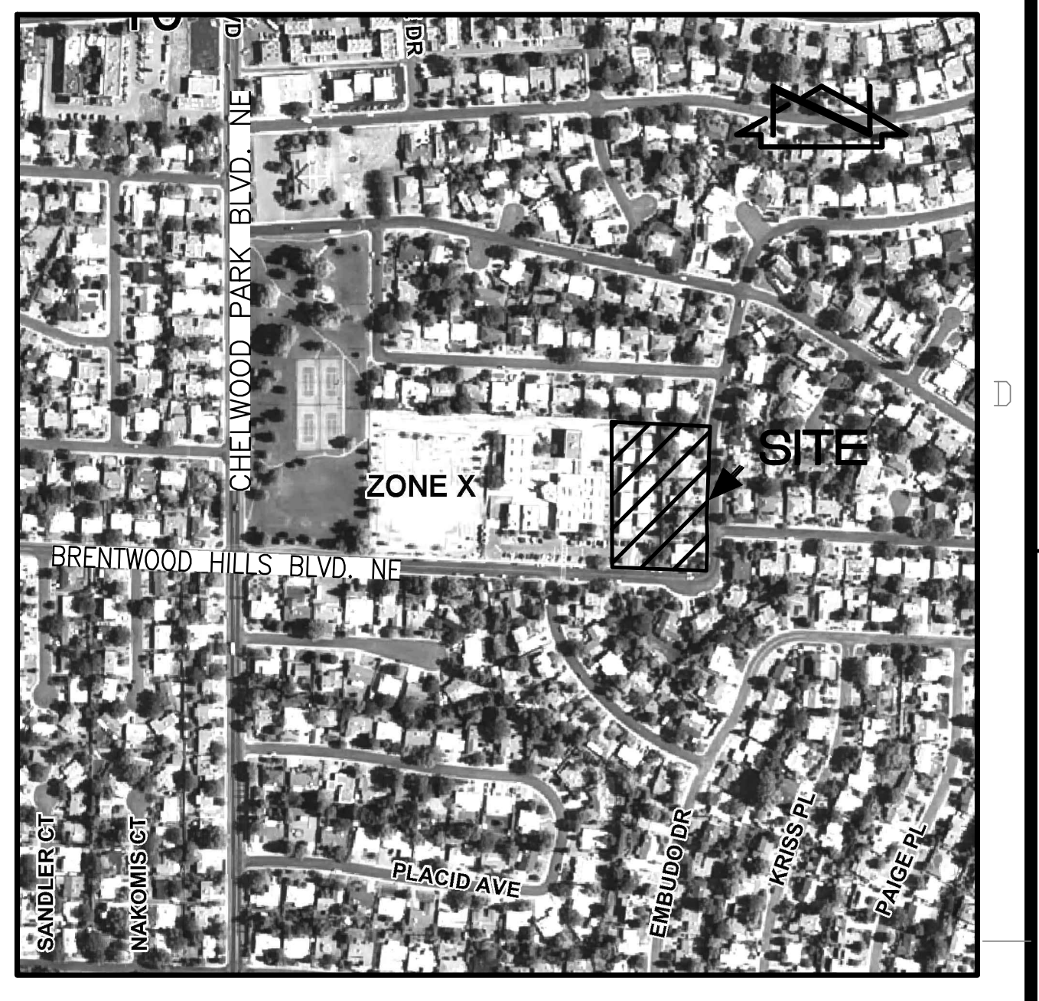
GENERAL NOTES

1. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE NEW MEXICO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION – 1987, PUBLISHED BY THE NEW MEXICO CHAPTER AMERICAN PUBLIC WORKS ASSOCIATION. (REVISED 12/06)
2. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM, 811, FOR DESIGNATION (LINE–SPOTTING) OF EXISTING PUBLIC UTILITIES AND EXISTING UTILITIES OWNED AND OPERATED BY ALBUQUERQUE PUBLIC SCHOOLS.
3. UTILITY INFORMATION SHOWN HEREON IS BASED UPON ONSITE SURFACE EVIDENCE, SCHOOL FILES OF THE ALBUQUERQUE PUBLIC SCHOOLS FACILITIES, DESIGN AND CONSTRUCTION, COA/ABCWUA DISTRIBUTION MAPS AND UTILITY LINE–SPOTS PROVIDED BY ONPOINT UTILITY LOCATING SERVICES, SITE UTILITY DIAGRAM DATED FEBRUARY 23, 2015. IN ADDITION UTILITY LINE–SPOTS WERE REQUESTED VIA THE NEW MEXICO ONE CALL SERVICE (TICKET NO. 2015082003). UTILITY LINES THAT APPEAR ON THESE DRAWINGS ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE OWNER OF SAID UTILITY, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS CONDUCTED ONLY PRELIMINARY INVESTIGATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. THIS INVESTIGATION IS NOT CONCLUSIVE, AND MAY NOT BE COMPLETE, THEREFORE, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFORE. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE, OR UNDERGROUND 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, PIPELINES, AND UNDERGROUND UTILITY LINES. IN PLANNING AND CONDUCTING EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
4. SHOULD A CONFLICT EXIST BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY FOR ALL PARTIES.
5. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ADJACENT PROPERTIES DURING CONSTRUCTION.
6. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING SAFETY AND HEALTH.
7. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT–OF–WAY OR ONTO PRIVATE PROPERTY.
8. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT–OF–WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.
9. CONTRACTOR SHALL NOTIFY THE ENGINEER NOT LESS THAN SEVEN (7) DAYS PRIOR TO STARTING WORK IN ORDER THAT THE ENGINEER MAY TAKE NECESSARY MEASURES TO ENSURE THE PRESERVATION OF SURVEY MONUMENTS. CONTRACTOR SHALL NOT DISTURB PERMANENT SURVEY MONUMENTS WITHOUT THE CONSENT OF THE ENGINEER AND SHALL NOTIFY THE ENGINEER AND BEAR THE EXPENSE OF REPLACING ANY THAT MAY BE DISTURBED WITHOUT PERMISSION. REPLACEMENT SHALL BE DONE ONLY BY THE ENGINEER. WHEN A CHANGE IS MADE IN THE FINISHED ELEVATION OF THE PAVEMENT OF ANY ROADWAY IN WHICH A PERMANENT SURVEY MONUMENT IS LOCATED, CONTRACTOR SHALL, AT HIS OWN EXPENSE, ADJUST THE MONUMENT COVER TO THE NEW GRADE UNLESS OTHERWISE SPECIFIED.
10. ALL PAVEMENT MARKINGS AND TRAFFIC SIGNS SHALL COMPLY WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION, LATEST EDITION.
11. IF THE REMOVAL OF EXISTING CURB AND GUTTER, SIDEWALK, AND/OR PAVING IS REQUIRED, THE CONTRACTOR SHALL SAWCUT AND/OR REMOVE TO THE NEAREST JOINT. WHEN ABUTTING NEW PAVEMENT TO EXISTING, THE CONTRACTOR SHALL CUT BACK THE EXISTING PAVING TO A STRAIGHT LINE IN ORDER TO REMOVE ANY BROKEN OR CRACKED PAVEMENT. CURB AND GUTTER AND/OR PAVEMENT SHOWN AS EXISTING AND NOT TO BE REMOVED UNDER THIS CONTRACT AND WHICH IS DAMAGED OR DISPLACED BY THE CONTRACTOR SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
12. A DISPOSAL SITE FOR ALL EXCESS EXCAVATION MATERIAL (CONTAMINATED OR OTHERWISE), ASPHALTIC PAVING, CONCRETE PAVING, ETC. SHALL BE OBTAINED BY THE CONTRACTOR IN COMPLIANCE WITH APPLICABLE REGULATIONS. ALL COSTS INCURRED IN OBTAINING A DISPOSAL SITE AND IN HAUL THERETO SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION, THEREFORE, NO SEPARATE PAYMENT SHALL BE MADE.
13. A BORROW SITE FOR IMPORT MATERIAL SHALL BE OBTAINED BY THE CONTRACTOR IN COMPLIANCE WITH APPLICABLE REGULATIONS. ALL COSTS INCURRED IN OBTAINING A BORROW SITE AND IN HAUL THERETO SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION, THEREFORE, NO SEPARATE PAYMENT SHALL BE MADE.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFELY OBTAINING THE REQUIRED COMPACTION. THE CONTRACTOR SHALL SELECT AND USE METHODS WHICH SHALL NOT BE INJURIOUS OR DAMAGING TO THE EXISTING FACILITIES AND STRUCTURES WHICH SURROUND THE WORK AREAS.
15. THE CONTRACTOR SHALL CONFINE HIS WORK WITHIN THE CONSTRUCTION LIMITS IN ORDER TO PRESERVE THE EXISTING IMPROVEMENTS AND SO AS NOT TO INTERFERE WITH THE OPERATIONS OF THE EXISTING FACILITIES.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING APPROPRIATE MEANS AND METHODS TO EXCAVATE AND TRENCH AND/OR INSTALL PIPE SO AS TO NOT EXCEED RIGHT–OF–WAY OR EASEMENT LIMITS, AND SO AS NOT TO INTERFERE WITH OTHER UTILITIES OR IMPROVEMENTS. THIS SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, SUPPORTING AND REPLACING, IF DAMAGED, ALL UTILITIES ENCOUNTERED DURING CONSTRUCTION. THIS SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.
18. ALL DIMENSIONS AND RADII OF CURB, CURB RETURNS, AND WALLS ARE SHOWN TO THE FACE OF CURB AND/OR WALL.
19. THE CONTRACTOR SHALL NOTIFY THE OWNER 48 HOURS PRIOR TO STRIPING SO THAT LAYOUT CAN BE VERIFIED.
20. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INTERPRETATIONS IT MAKES WITHOUT FIRST CONTACTING THE ENGINEER AS REQUIRED ABOVE.
21. WHEN APPLICABLE, CONTRACTOR SHALL SECURE, ON BEHALF OF THE OWNER AND OPERATORS, "TOPSOIL DISTURBANCE PERMIT" FROM THE CITY AND/OR FILE A NOTICE OF INTENT (N.O.I.) WITH THE EPA PRIOR TO BEGINNING CONSTRUCTION.
22. ALL FILL SHALL BE CLEAN, FREE FROM VEGETATION, DEBRIS, AND OTHER DELETERIOUS MATERIALS, AND SHALL NOT BE CONTAMINATED WITH HYDROCARBONS OR OTHER CHEMICAL CONTAMINANTS.
23. ALL FILL SHALL BE COMPACTED TO A MINIMUM OF 95% ASTM D–1557 UNLESS A GREATER COMPACTION REQUIREMENT IS OTHERWISE SPECIFIED.
24. CAUTION: THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR. ALL EXCAVATION, TRENCHING AND SHORING ACTIVITIES MUST BE CARRIED–OUT IN ACCORDANCE WITH OSHA 29 CFR 1926, SUBPART P–EXCAVATIONS.



E6 VICINITY MAP H–22

SCALE: 1" = 750'



D6 F.I.R.M. PANEL 357G

SCALE: 1" = 500'

LEGAL DESCRIPTION

TRACT A, ONATE ELEMENTARY SCHOOL (2010C–128, FILED 11/16/2010, DOCUMENT # 2010116363)

BENCHMARKS

PROJECT BENCHMARKS – NAD 1983/NGVD 1929

A 3 1/4" ALUMINUM DISK STAMPED "12–H22 1989" (HORIZONTAL), SET FLUSH IN THE TOP OF CURB 171 FEET WEST OF THE INTERSECTION OF MENAUL BOULEVARD AND MARIE PARK DRIVE N.E.
ELEVATION = 5778.827 FEET (NAVD 1988)
PROJECT ELEVATION = 5776.23 FEET (NGVD 1929)

A CHISELED "□" (VERTICAL), ON TOP OF CURB AT THE SOUTHEAST CORNER OF THE SITE, AS SHOWN ON THIS SHEET (TEMPORARY BENCHMARK SET BY PREVIOUS SURVEY).
ELEVATION = 5770.44 FEET (NGVD 1929)

TEMPORARY BENCHMARK #1 (T.B.M.)

A MAG NAIL WITH WASHER SET IN CURB, AS SHOWN ON THIS SHEET.
ELEVATION = 5766.00 FEET (NGVD 1929)

TEMPORARY BENCHMARK #2 (T.B.M.)

A MAG NAIL WITH WASHER SET IN CONCRETE, AS SHOWN ON THIS SHEET.
ELEVATION = 5765.31 FEET (NGVD 1929)

INDEX OF CIVIL DRAWINGS

SHEET	DESCRIPTION
C–001	DRAINAGE PLAN AND CALCULATIONS
CG–101	GRADING PLAN
CG–501	GRADING AND DRAINAGE SECTIONS AND DETAILS
CU–101	WATER, SANITARY SEWER AND NATURAL GAS UTILITY SITE PLAN
CU–102	MINI WORK ORDER FIRE PROTECTION IMPROVEMENTS
CU–501	WATER AND SANITARY SEWER SECTIONS AND DETAILS

2015.007.1

STUDIO SW ARCHITECTS

STUDIO SOUTHWEST ARCHITECTS, INC.
2101 Mountain Rd. NW, Albuquerque, NM 87104
505.843.9639 fax 505.843.9683
Web Site: www.studioswarch.com
E-Mail: mail@studioswarch.com

CONSULTANTS

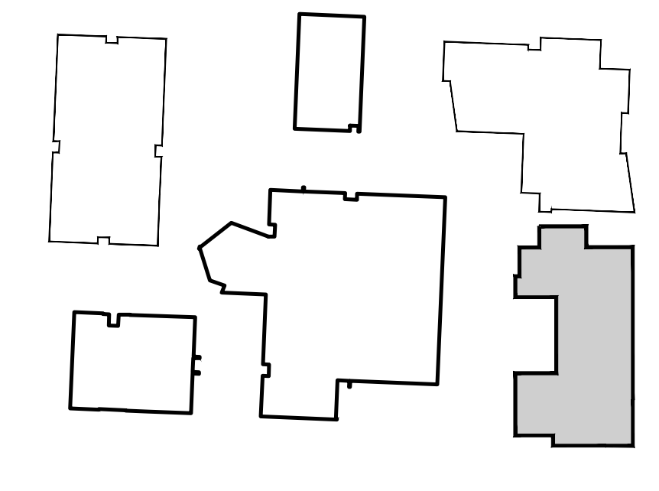
HIGH MESA Consulting Group
6010-B MIDWAY PARK BLVD. NE
ALBUQUERQUE, NEW MEXICO 87109
PHONE: 505.345.4250 FAX: 505.345.4254
www.highmesacg.com

Architect Engineer

J. GRAEME MEANS
13676
J. Graeme Means
11/19/2015

ONATE E.S. CLASSROOM BUILDING

12415 BRENTWOOD HILLS, NE
ALBUQUERQUE, NM
87112



Key Plan
NTS

MARK	DATE	DESCRIPTION

ISSUE:	100% SUBMITTAL
PROJECT NO:	0822
CAD DWG FILE:	150071_C–001
DRAWN BY:	S.C.C./J.Y.R.
CHECKED BY:	G.M.
DATE:	NOVEMBER 19, 2015

SHEET TITLE

DRAINAGE PLAN AND CALCULATIONS

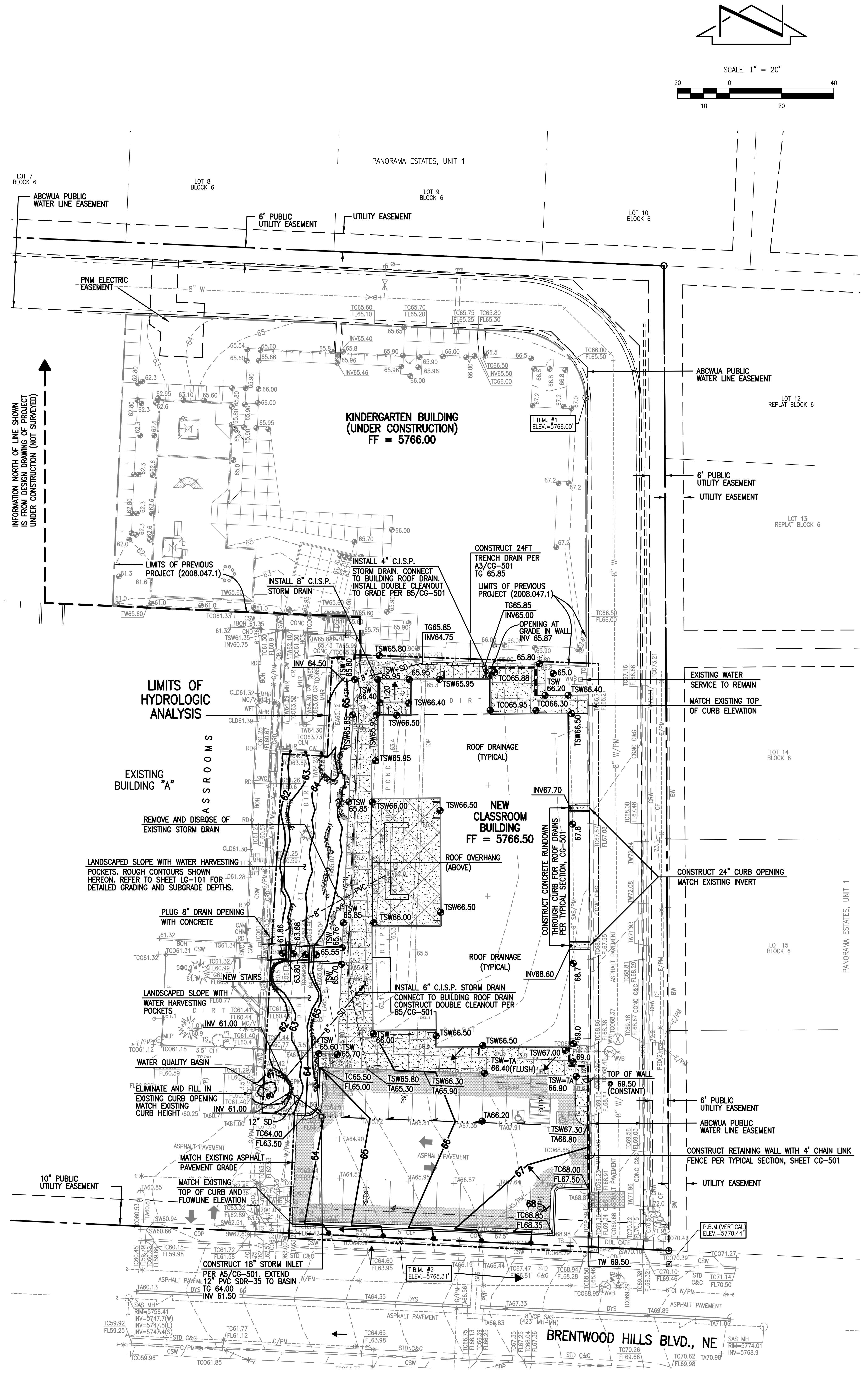
C–001

P:\data\2015\2015.007.1\ENG\150071_C–001.dwg

File Path:	P:\DATA\2015\2015.007.1\ENG\	Plot Date:	11–19–2015
File Name:	150071_C–001.DWG	Plot Time:	2:50 pm

11/19/2015 2:47 PM

P:\data\2015\2015.007.1\ENG\150071_CG-101.dwg



CONSTRUCTION NOTES:

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM, 811, FOR DESIGNATION (LINE-SPOTTING) OF EXISTING PUBLIC UTILITIES AND EXISTING UTILITIES OWNED AND OPERATED BY ALBUQUERQUE PUBLIC SCHOOLS.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INTERPRETATIONS IT MAKES WITHOUT FIRST CONTACTING THE ENGINEER AS REQUIRED ABOVE.
3. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
4. UTILITY INFORMATION SHOWN HEREON IS BASED UPON ONSITE SURFACE EVIDENCE, SCHOOL FILES OF THE ALBUQUERQUE PUBLIC SCHOOLS FACILITIES, DESIGN AND CONSTRUCTION, COA/ABCWUA DISTRIBUTION MAPS AND UTILITY LINE-SPOTS PROVIDED BY ONPOINT UTILITY LOCATING SERVICES, SITE UTILITY DIAGRAM DATED FEBRUARY 23, 2015. IN ADDITION UTILITY LINE-SPOTS WERE REQUESTED VIA THE NEW MEXICO ONE CALL SERVICE (TICKET NO. 2015082003). UTILITY LINES THAT APPEAR ON THESE DRAWINGS ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE OWNER OF SAID UTILITY, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS CONDUCTED ONLY PRELIMINARY INVESTIGATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. THIS INVESTIGATION IS NOT CONCLUSIVE, AND MAY NOT BE COMPLETE, THEREFORE, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFORE. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE, OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF 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, PIPELINES, AND UNDERGROUND UTILITY LINES. IN PLANNING AND CONDUCTING EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.

EROSION CONTROL MEASURES:

1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY.
2. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.
3. WHEN APPLICABLE, CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" FROM THE CITY AND/OR FILE A NOTICE OF INTENT (N.O.I.) WITH THE EPA PRIOR TO BEGINNING CONSTRUCTION.

NOTE:

THIS IS NOT A BOUNDARY SURVEY; DATA IS SHOWN FOR ORIENTATION ONLY. THE BOUNDARY INFORMATION DEPICTED BY THIS PLAN IS BASED UPON THE "PLAT OF TRACT A, ONATE ELEMENTARY SCHOOL" PREPARED BY HIGH MESA CONSULTING GROUP, NMPS 11184, RECORDED 11/16/2010 (2010C-128, DOC.# 2010116363). THE TOPOGRAPHIC INFORMATION DEPICTED HEREON IS BASED UPON THE "PARTIAL TOPOGRAPHIC AND UTILITY SURVEY" PREPARED BY HIGH MESA CONSULTING GROUP, NMPS NO. 11184, DATED 03/06/2015 (2014.181.6).

File Path: P:\DATA\2015\2015.007.1\ENG\
File Name: 150071_CG-101.DWG
Plot Date: 11-19-2015
Plot Time: 2:46 pm

STUDIO SW ARCHITECTS

STUDIO SOUTHWEST ARCHITECTS, INC.
2101 Mountain Rd. NW, Albuquerque, NM 87104
505.843.9639 fax 505.843.9683
Web Site: www.studioswarch.com
E-Mail: mail@studioswarch.com

CONSULTANTS

HIGH MESA Consulting Group
6010-B MIDWAY PARK BLVD. NE
ALBUQUERQUE, NEW MEXICO 87109
PHONE: 505.345.4250 FAX: 505.345.4254
www.highmesacg.com

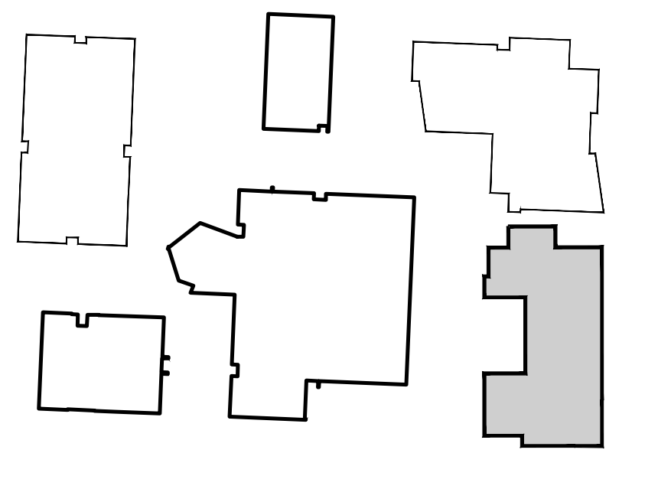
Architect **Engineer**

J. GRAEME MEANS 13676

11/19/2015

ONATE E.S. CLASSROOM BUILDING

12415 BRENTWOOD HILLS, NE
ALBUQUERQUE, NM
87112



Key Plan
NTS

MARK	DATE	DESCRIPTION

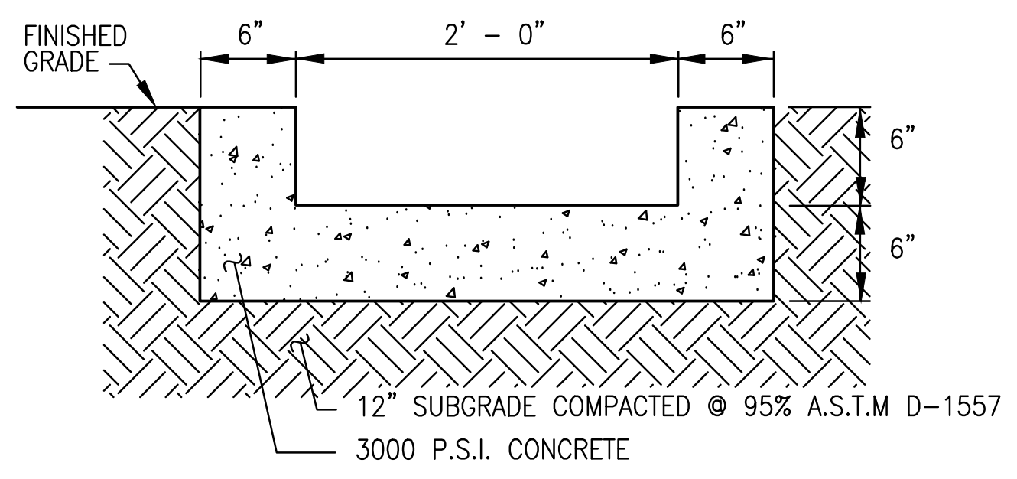
ISSUE: 100% SUBMITTAL
PROJECT NO: 0822
CAD DWG FILE: 150071_CG-101
DRAWN BY: S.C.C./J.Y.R.
CHECKED BY: G.M.
DATE: NOVEMBER 19, 2015

SHEET TITLE

GRADING PLAN

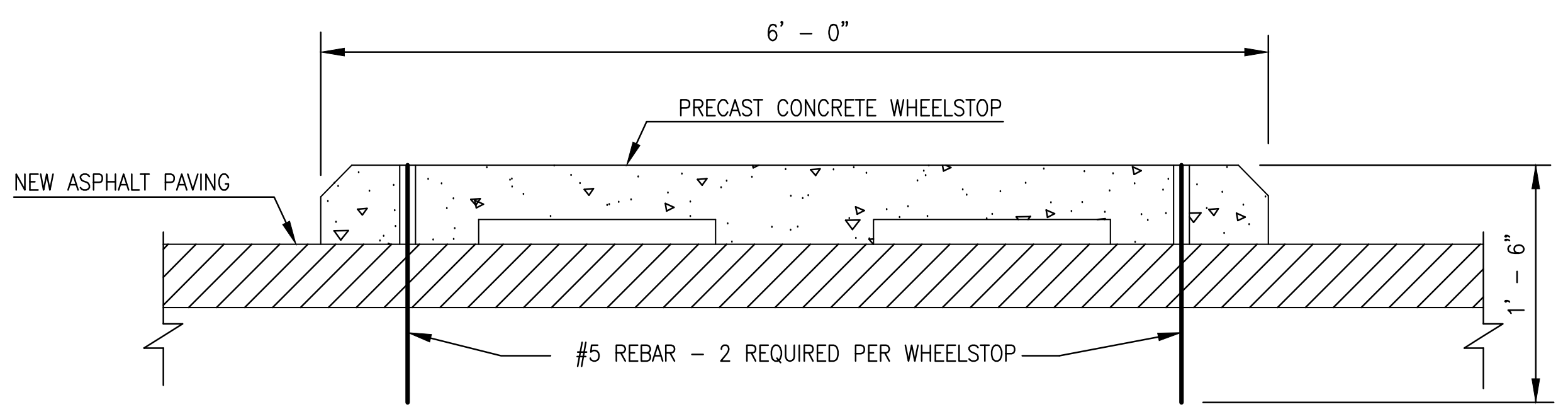
CG-101

2015.007.1



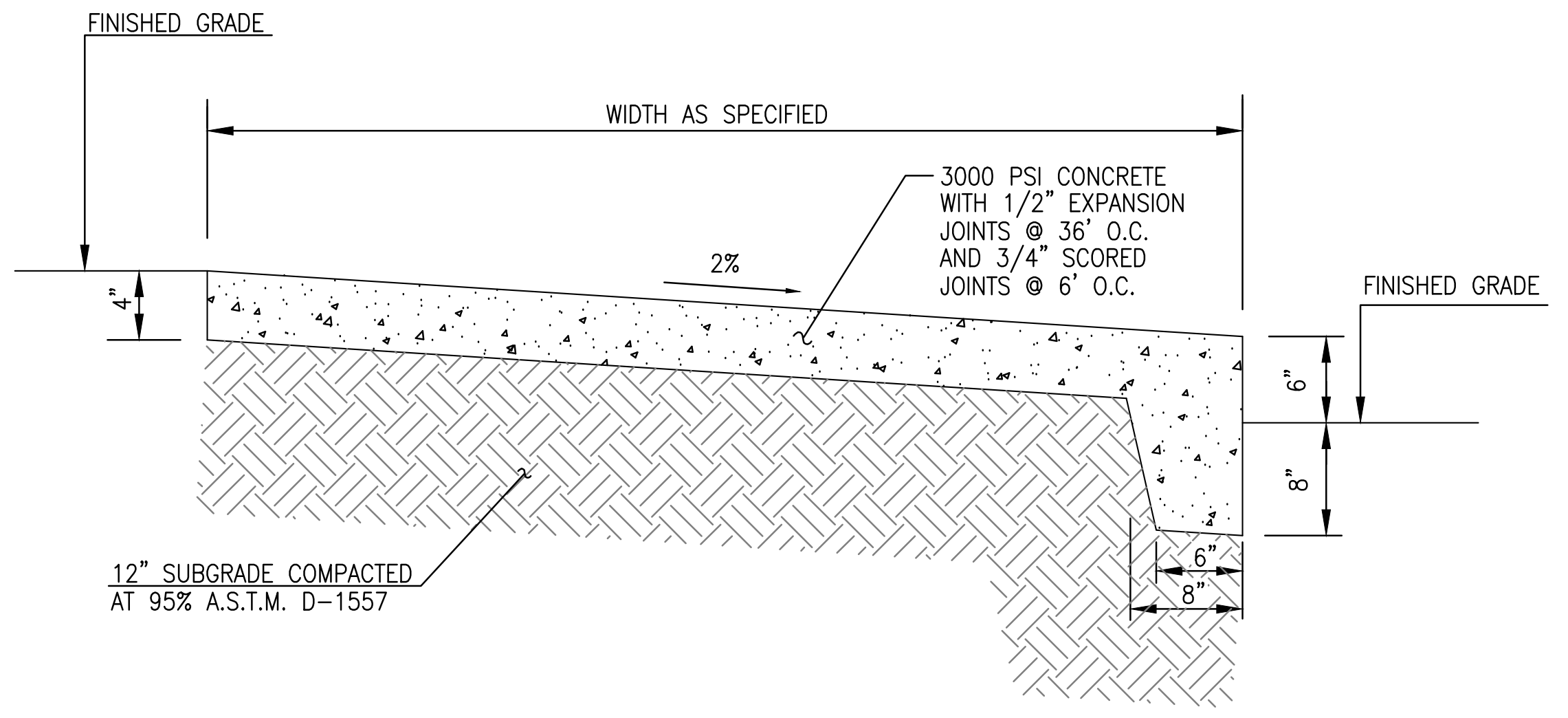
D1 TYPICAL RUNDOWN SECTION

SCALE: 1" = 1'-0"



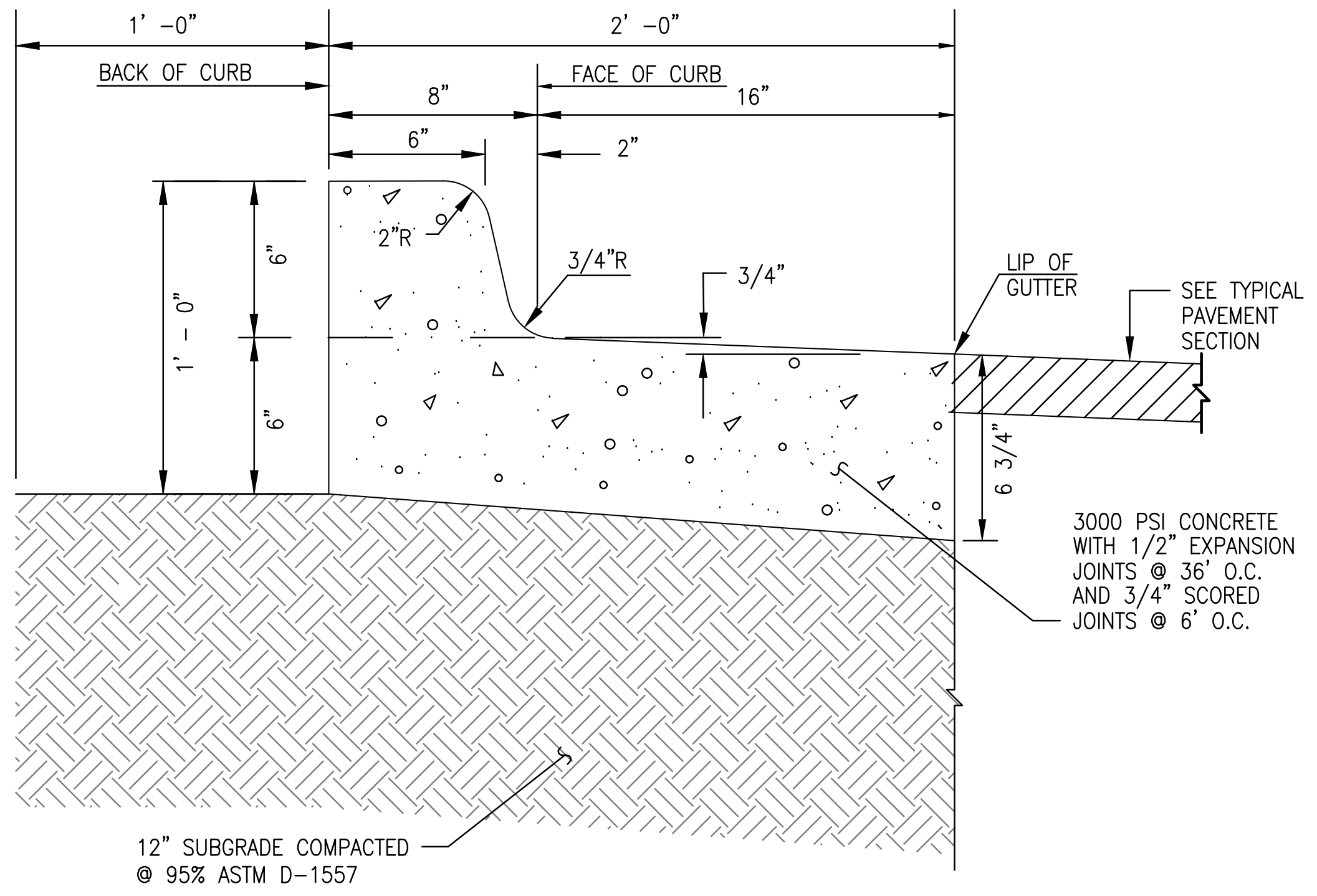
C1 WHEELSTOP SECTION

SCALE: 1" = 0'-6"



B1 TURNDOWN SIDEWALK SECTION

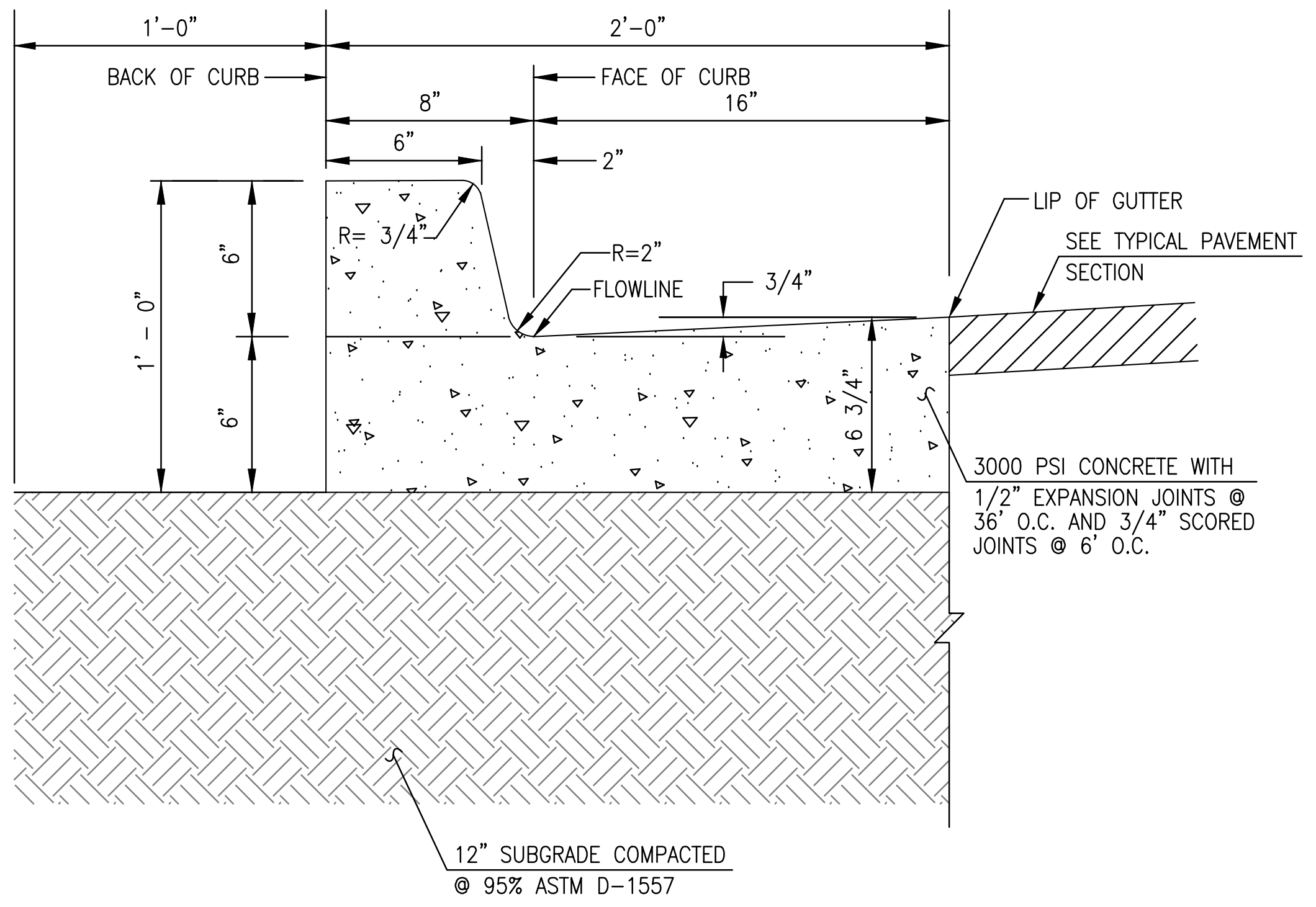
SCALE: 1" = 1'-0"



A1 TYPICAL SIX-INCH DEPRESSED CURB AND GUTTER

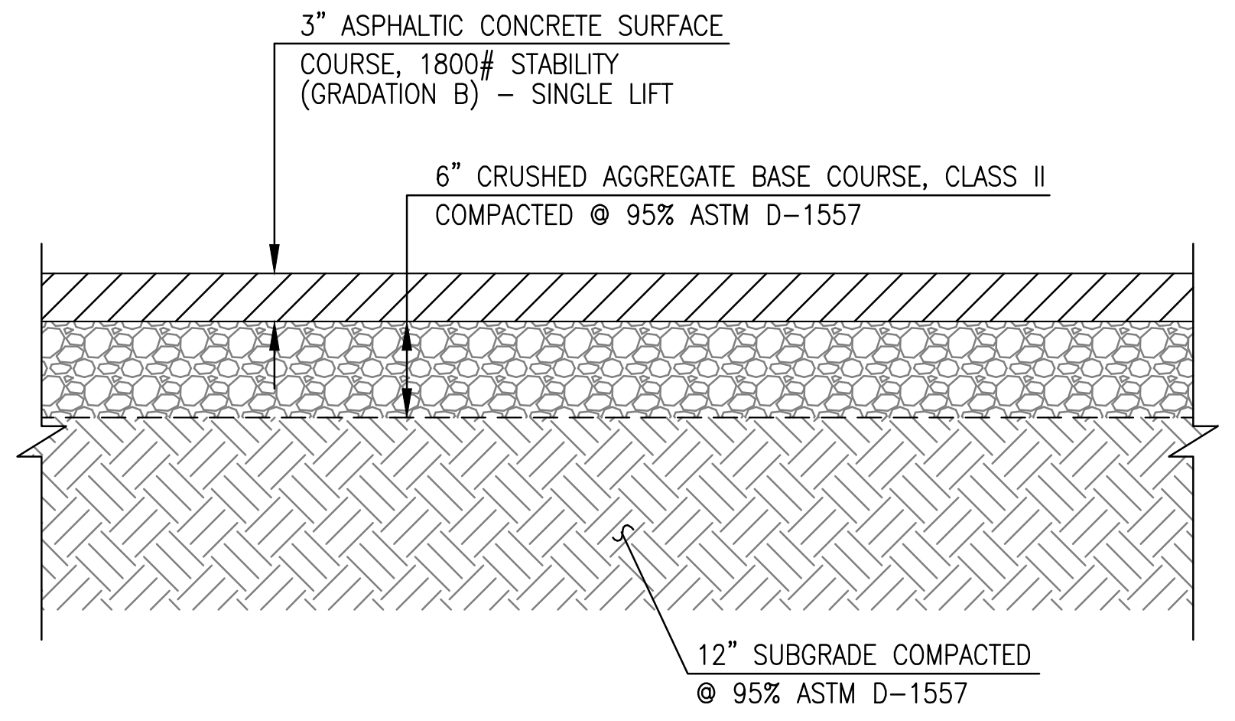
SCALE: 1" = 0'-6"

NOTE: USE THIS SECTION FOR CASES WHERE PAVING SLOPES AWAY FROM FACE OF CURB



C3 TYPICAL SIX-INCH CURB & GUTTER

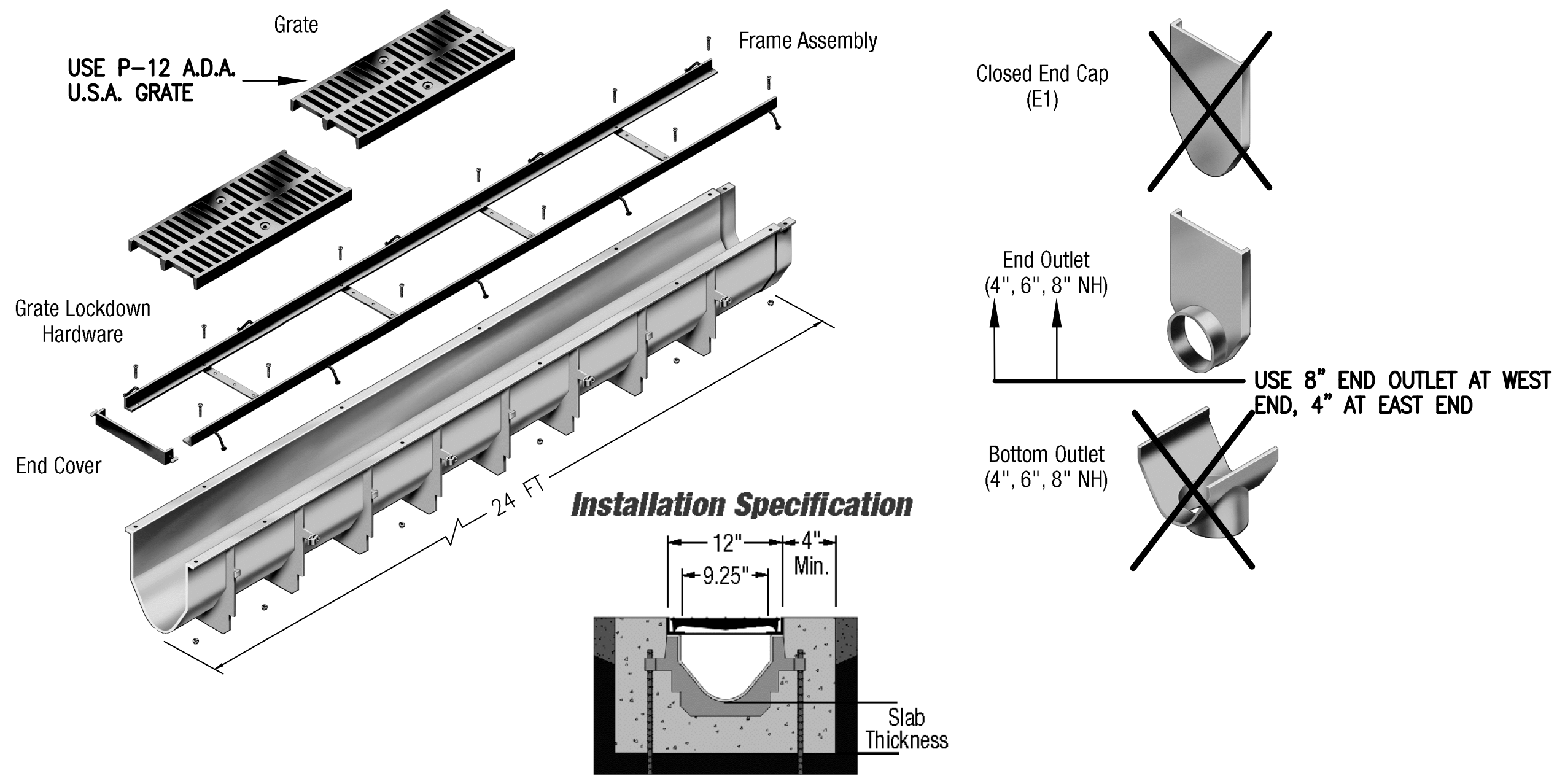
SCALE: 1" = 0'-6"



NOTE: PAVEMENT SECTION TAKEN FROM THE GEOTECHNICAL REPORT BY GEOTEST INC., DATED 5-21-2015

B3 TYPICAL ASPHALT PAVEMENT W/ BASE COURSE SECTION

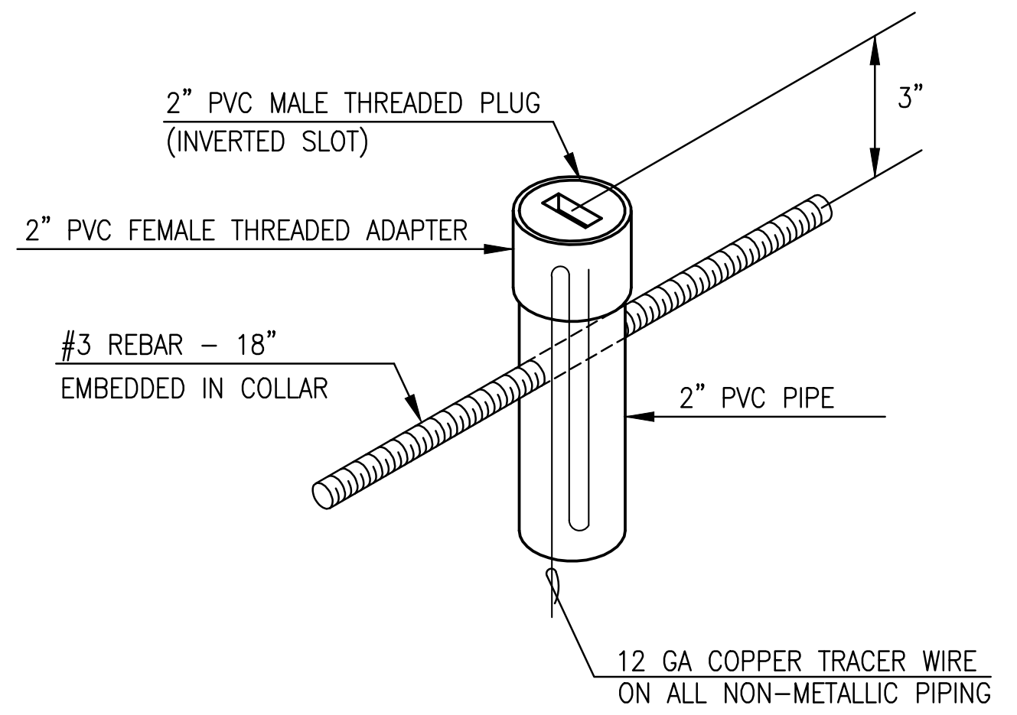
SCALE: 1" = 1'-0"



USE SECTIONS 8207, 8206, AND 8205 FROM WEST TO EAST (13.25" DEPTH AT WEST TO 10.25" DEPTH AT EAST)

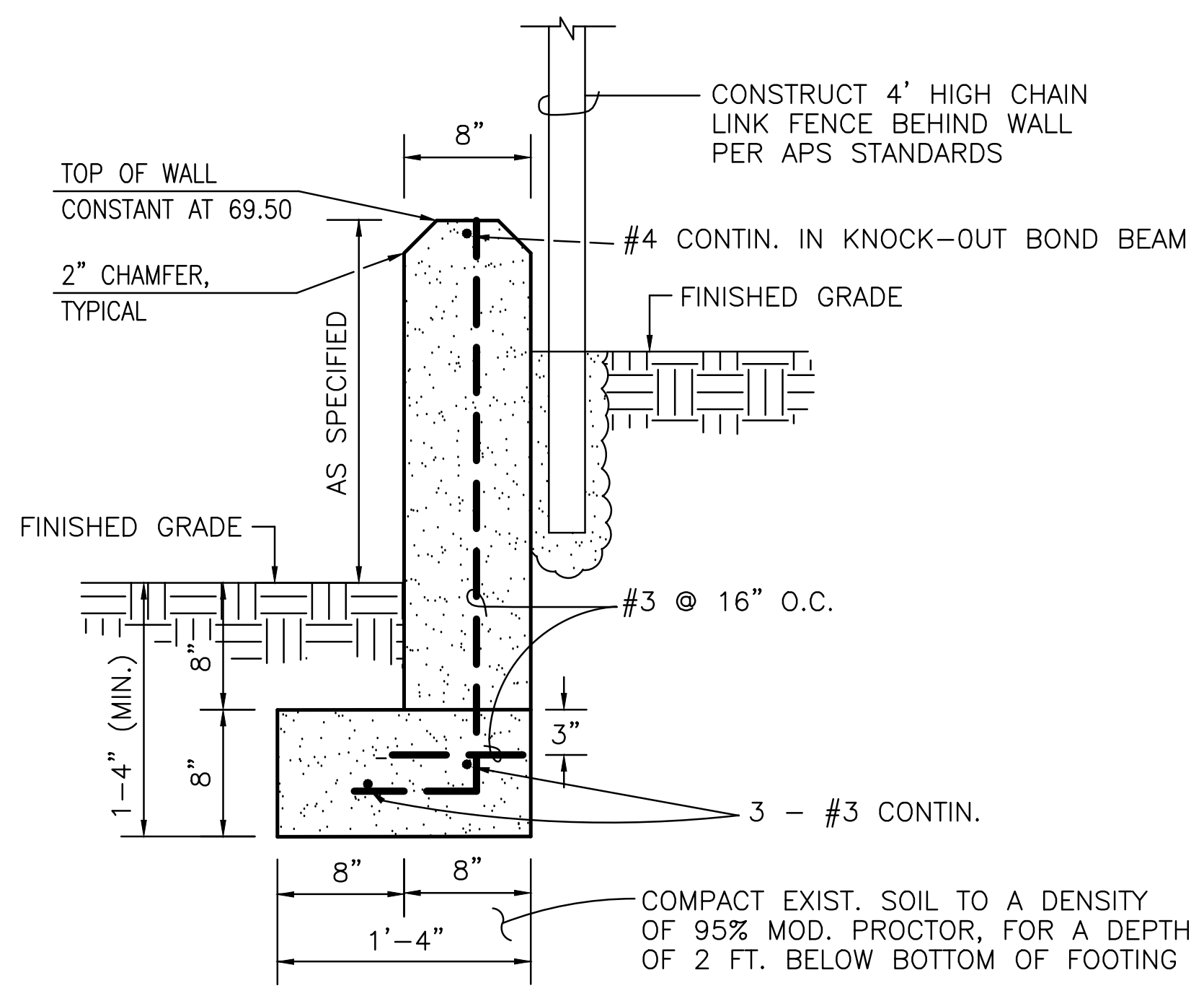
A3 TRENCH DRAIN SECTIONS AND DETAILS (ZURN Z-882)

SCALE: 1" = 2'-0"



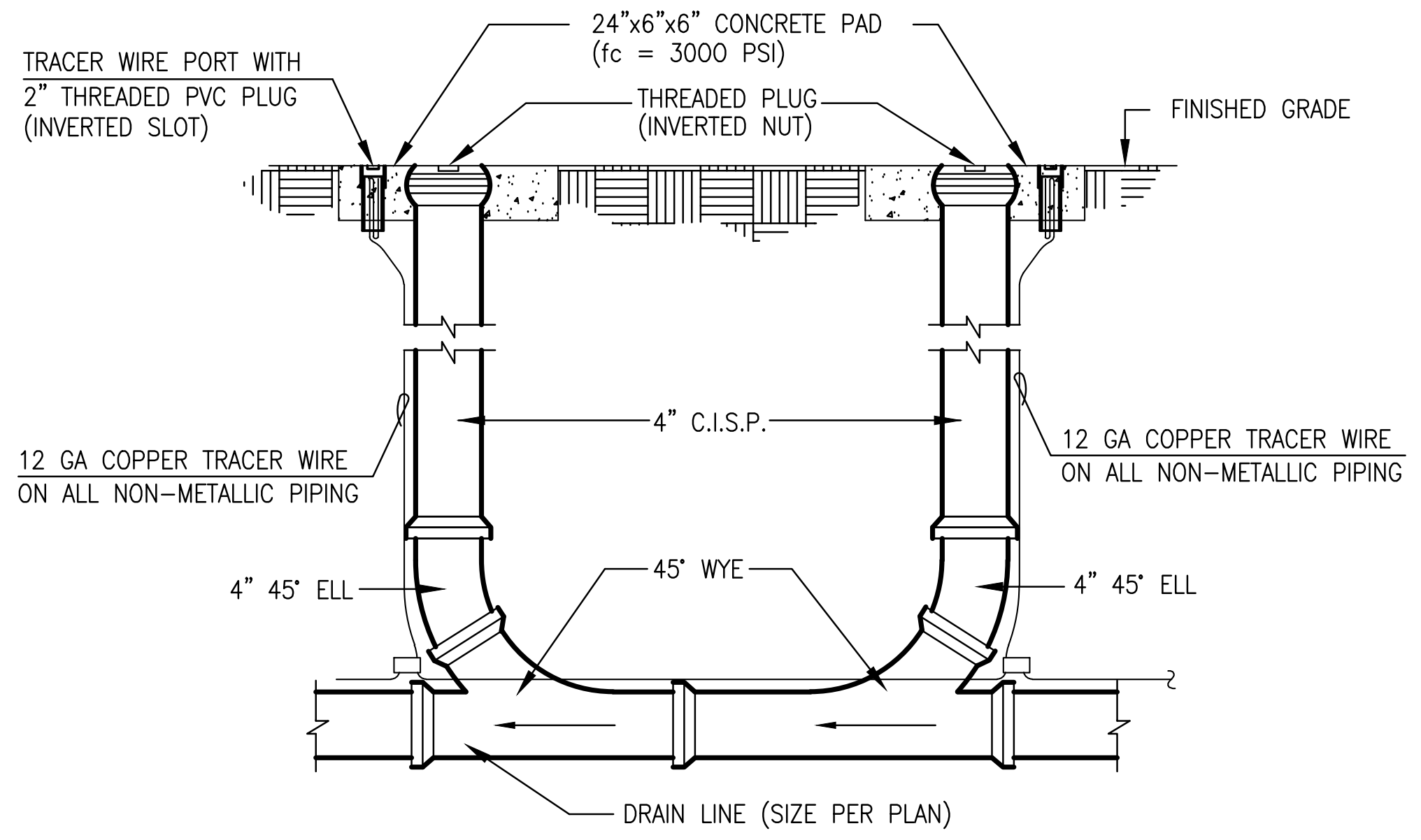
D5 TYPICAL TRACER WIRE ACCESS PORT

NOT TO SCALE



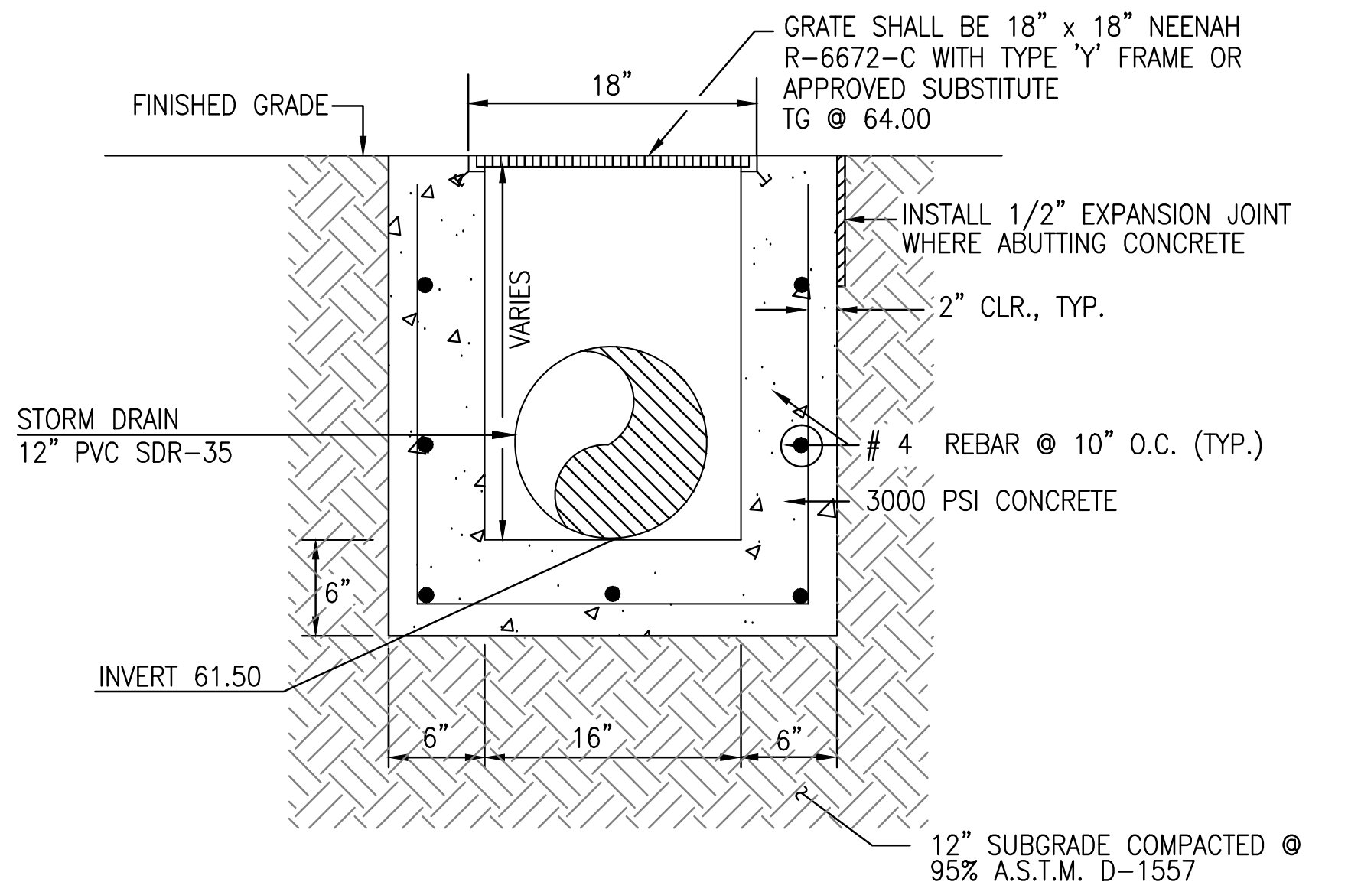
C5 TYPICAL RETAINING WALL < 3'

SCALE: 1" = 1'



B5 TYPICAL DOUBLE CLEANOUT SECTION

NOT TO SCALE



A5 TYPICAL 18"x18" STORM INLET SECTION

SCALE: 1" = 1'

2015.007.1

STUDIO SW ARCHITECTS

STUDIO SOUTHWEST ARCHITECTS, INC.
2101 Mountain Rd. NW, Albuquerque, NM 87104
505.843.9639 fax 505.843.9683
Web Site: www.studioswarch.com
E-Mail: mail@studioswarch.com

CONSULTANTS

HIGH MESA Consulting Group
6010-B MIDWAY PARK BLVD. NE
ALBUQUERQUE, NEW MEXICO 87109
PHONE: 505.345.4250 FAX: 505.345.4254
www.highmesacg.com

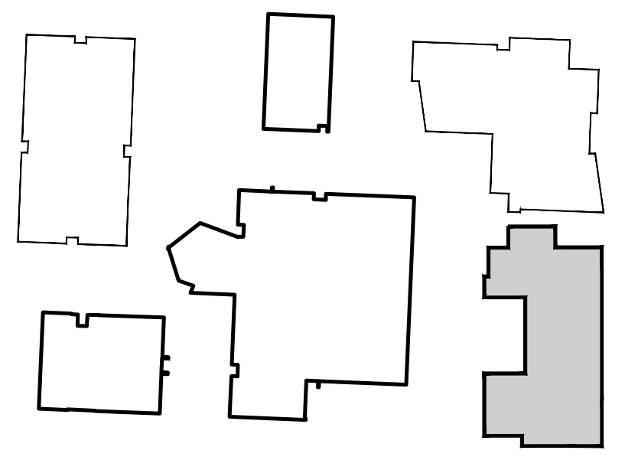
Architect

Engineer

J. GRAEME MEANS
13676
J. Graeme Means
11/19/2015

ONATE E.S.
CLASSROOM BUILDING

12415 BRENTWOOD HILLS, NE
ALBUQUERQUE, NM
87112



Key Plan

NTS

MARK	DATE	DESCRIPTION

ISSUE:	100% SUBMITTAL
PROJECT NO:	0822
CAD DWG FILE:	150071_CG-501
DRAWN BY:	S.C.C./J.Y.R.
CHECKED BY:	G.M.
DATE:	NOVEMBER 19, 2015

SHEET TITLE

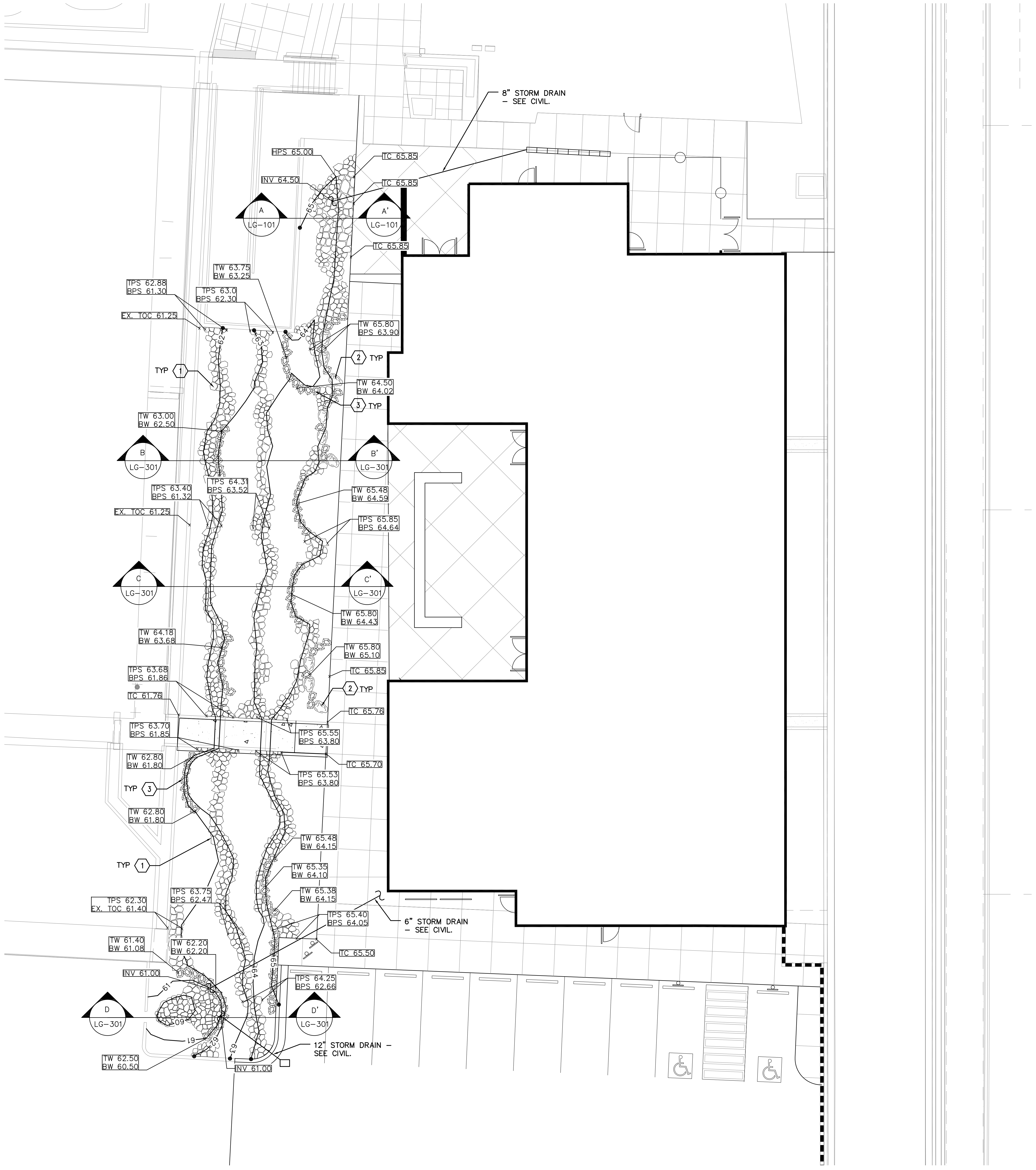
GRADING SECTION AND DETAILS

CG-501

11/19/2015 4:28 PM

P:\$Year-2015\1615\1615-acad\1615-$current\1615-SHEET FILES\1615-LG101.dwg

AZAHM



A1 LANDSCAPE GRADING PLAN

SCALE: 1"=10'-0"

0 10' 20'

NORTH

GRADING LEGEND

TW	TOP OF WALL
BW	BOTTOM OF WALL
FG	FINISH GRADE
HPS	HIGH POINT OF SWALE
TC	TOP OF CONCRETE
TOC	TOP OF CURB
TPS	TOP OF PLATED SLOPE
BPS	BOTTOM OF PLATED SLOPE
⁀	PROPOSED CONTOUR
⁀	EXISTING CONTOUR
1.0% ←	SLOPE, DIRECTION OF FLOW
INV	INVERT OF DRAIN PIPE

⬡ KEYED NOTES

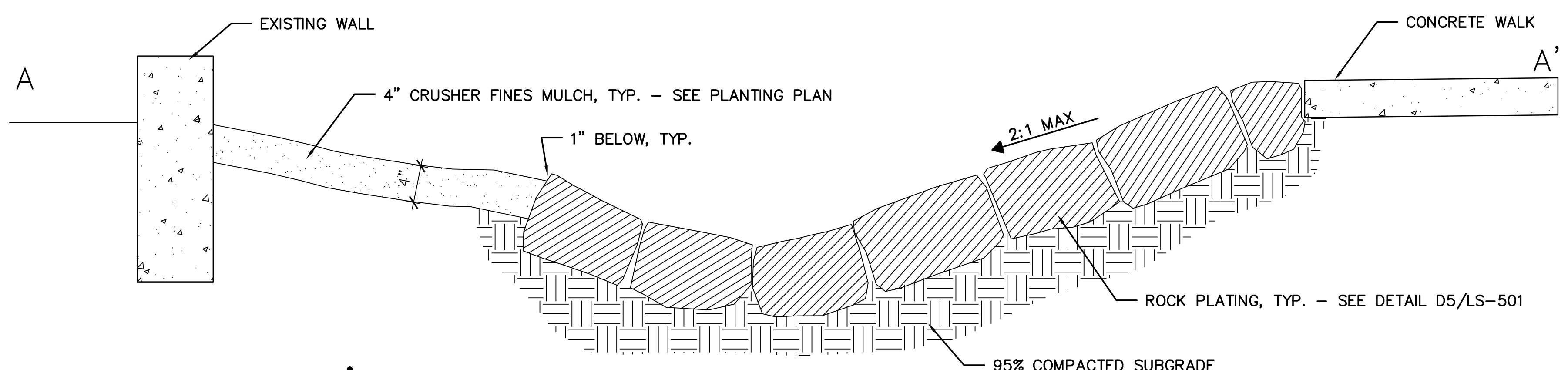
1. STONE PLATING – INSTALL PER DETAIL D5/LS-501.
2. SEATING BOULDER – INSTALL PER DETAIL C4/LS-501.
3. RETAINING BOULDER – INSTALL PER DETAIL A4/LS-501.

GRADING NOTES

1. REFER TO CIVIL GRADING AND DRAINAGE PLAN FOR ESTABLISHMENT OF SUBGRADE BY GENERAL CONTRACTOR PRIOR TO WORK SHOWN ON THIS SHEET.

NOTE: ALL WORK ON THIS SHEET WILL BE CONSTRUCTED BY THE OWNER'S ON-CALL LANDSCAPE CONTRACTOR. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING AND COORDINATING THE WORK OF THE ON-CALL LANDSCAPE CONTRACTOR.

NOTE: WHERE CONSTRUCTION REFERENCES APS STANDARD DETAILS AND SPECIFICATIONS FOR SITE DESIGN AND CONSTRUCTION, THEY CAN BE FOUND AT http://www.aps.edu/facilities-design-and-construction/documents/design-standards-and-guidelines/Site_Standards_8_2014.PDF



SECTION A – A'

SCALE: 1"=1'-0"

STUDIO SW ARCHITECTS

STUDIO SOUTHWEST ARCHITECTS, INC.
2101 Mountain Rd. NW, Albuquerque, NM 87104
505.843.9639 fax 505.843.9683
Web Site: www.studioswarch.com
E-Mail: mail@studioswarch.com

CONSULTANTS

MRWM
LANDSCAPE ARCHITECTS
Morrow Reardon Wilkinson Miller, Ltd.
mrwmla.com 505 268 2266

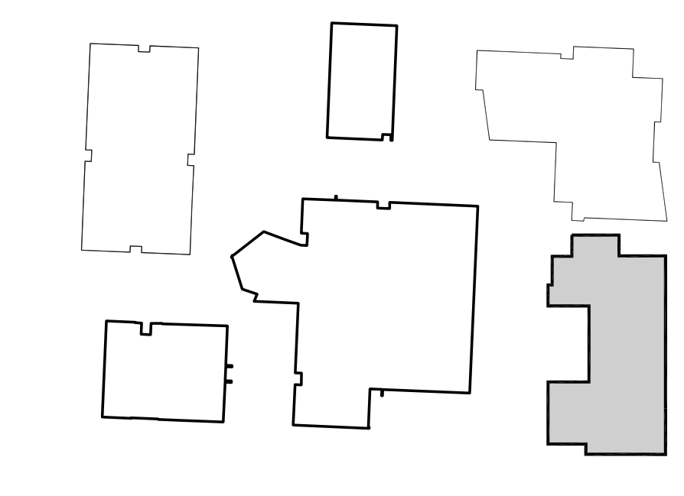
Architect

Engineer

DENNIS C. WILKINSON
NO. 149
11-19-15

ONATE E.S. CLASSROOM BUILDING

12415 BRENTWOOD HILLS, NE
ALBUQUERQUE, NM
87112



Key Plan

NTS

MARK	DATE	DESCRIPTION

ISSUE:	100% Submittal
PROJECT NO:	0822
CAD DWG FILE:	1615-LG101.DWG
DRAWN BY:	KRA
CHECKED BY:	DCW
DATE:	NOVEMBER 19, 2015

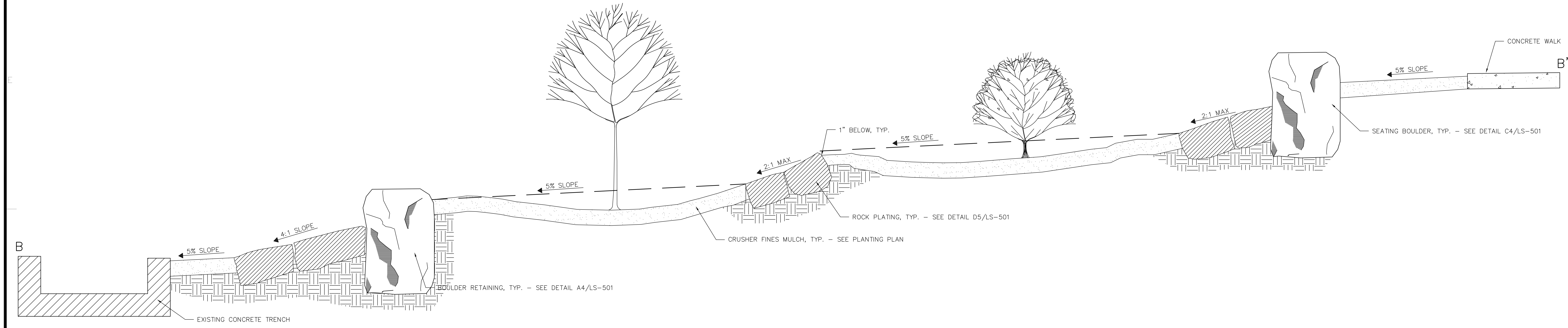
SHEET TITLE

LANDSCAPE
GRADING PLAN

LG-101

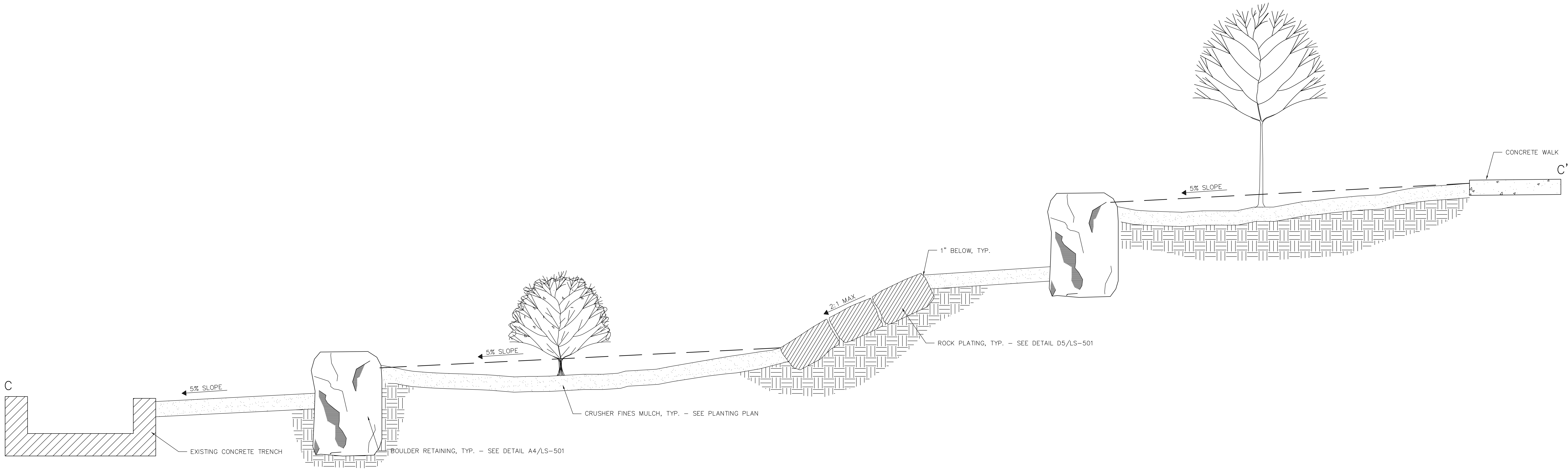
11/19/2015 4:32 PM

P:\$Year-2015\1615\1615-acad\1615-$current\1615-SHEET FILES\1615-LG301.dwg



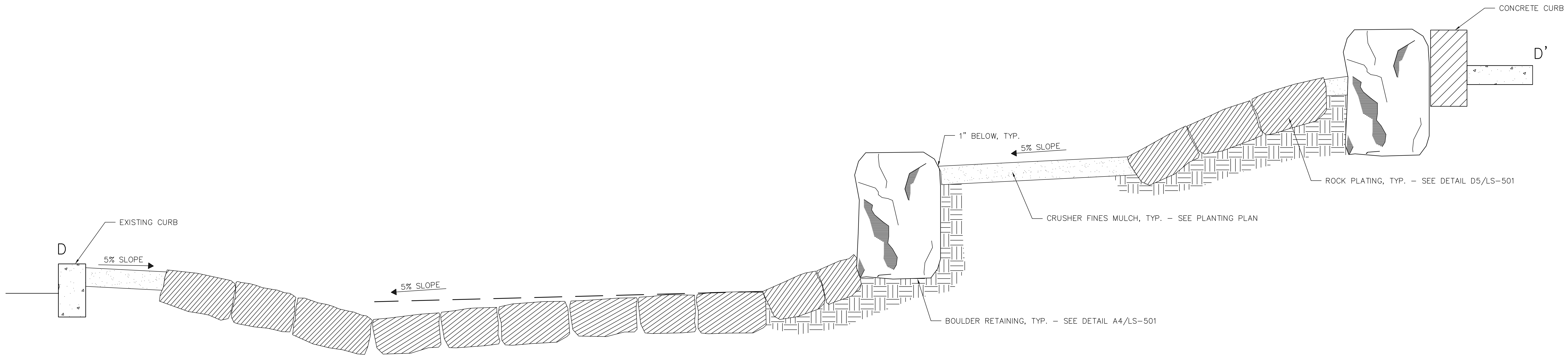
SECTION B – B'

SCALE: 1"=1'-0"



SECTION C – C'

SCALE: 1"=1'-0"



SECTION D – D'

SCALE: 1"=1'-0"

KAMAGAI

STUDIO SW ARCHITECTS

STUDIO SOUTHWEST ARCHITECTS, INC.
2101 Mountain Rd. NW, Albuquerque, NM 87104
505.843.9639 fax 505.843.9683
Web Site: www.studioswarch.com
E-Mail: mail@studioswarch.com

CONSULTANTS

MRWM
LANDSCAPE ARCHITECTS
Morrow Reardon Wilkinson Miller, Ltd.
mrwmla.com 505 268 2266

Architect

Engineer

STATE OF NEW MEXICO
DENNIS C. WILKINSON
NO. 149
REGISTERED LANDSCAPE ARCHITECT
11-19-15

ONATE E.S.
CLASSROOM
BUILDING
12415 BRENTWOOD HILLS, NE
ALBUQUERQUE, NM
87112

Key Plan

NTS

MARK	DATE	DESCRIPTION

ISSUE:	100% Submittal
PROJECT NO:	0822
CAD DWG FILE:	1615-LG301.DWG
DRAWN BY:	KRA
CHECKED BY:	DCW
DATE:	NOVEMBER 19, 2015

SHEET TITLE

LANDSCAPE GRADING
SECTIONS

LG-301