

CITY OF ALBUQUERQUE



Timothy M. Keller, Mayor

January 16, 2018

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

**RE: Explora Surplus Property Drivepad
Grading Plan
Engineer's Stamp Date: 01/11/18
Hydrology File: J13D206**

Dear Mr. Means:

PO Box 1293

Based upon the information provided in your resubmittal received 01/12/2018, the Grading Plan is approved for Grading Permit and Paving Permit.

Albuquerque

If you have any questions, please contact me at 924-3995 or rbrissette@cabq.gov.

NM 87103

Sincerely,

www.cabq.gov

Renée C. Brissette, P.E. CFM
Senior Engineer, Hydrology
Planning Department

CALCULATIONS

DISPLACED RETENTION PONDING VOLUME

- OVERFLOW WSL = 60.8± (AT SOUTHWEST CORNER OF PROPERTY)
- PONDING VOLUME
- AREA OF EXISTING POND DISPLACED BY NEW DRIVEWAY = 2,650 (USING AVERAGE END-AREA METHOD)
- CULVERT VOLUME CAPACITY
- VOLUME OF 2-48" DIA. HDPE @ 38 LF = 955 CF
- TOTAL VOLUME DISPLACED = 2,650 - 955 = 1,695 CF

DEVELOPED RETENTION PONDING VOLUME

- 78 SF = EXISTING CROSS-SECTIONAL AREA OF DITCH TO BE REGRADED
- 107 SF = DEVELOPED CROSS-SECTIONAL AREA OF DITCH AFTER REGRADEING
- 75 LF = LENGTH OF DITCH TO BE REGRADED
- EXISTING CAPACITY = 78 SF * 75 LF = 5,850 CF
- DEVELOPED CAPACITY = 107 SF * 75 LF = 8,025 CF
- ADDITIONAL CAPACITY = 8025 - 5850 = 2,175 CF INCREASED CAPACITY > 1,695 CF DISPLACED THEREFORE OK.

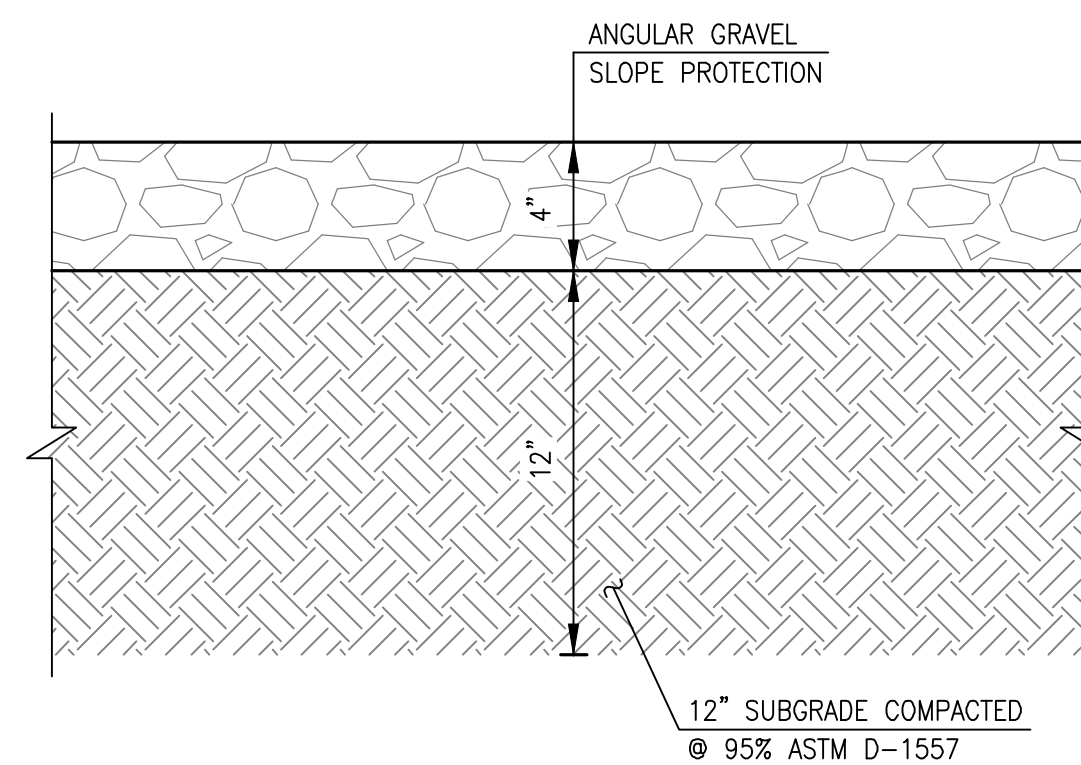
DRAINAGE PLAN

THE PROJECT SITE IS A NEW ENTRANCE TO AN EXISTING DEVELOPED PAVED SITE COMMERCIAL SITE WITHIN AN INFILL AREA. THE SITE IS LOCATED NEAR THE INTERSECTION OF 18TH STREET NW AND BELLAMAH AVE NW. THE PROPOSED PROJECT SCOPE IS TO CREATE A NEW DRIVEPAD ENTRANCE FROM 18TH STREET, ACROSS AN EXISTING PRIVATE RETENTION POND, TO SERVE THE EXISTING SITE. IN PREPARATION OF THIS PROJECT, THE 1977 PLAN OF RECORD FOR THE SITE WAS REVIEWED AND IT WAS NOTED THAT THIS PLAN DID NOT INCLUDE A DRAINAGE PLAN OR CALCULATIONS ESTABLISHING THE VOLUME OF THE RETENTION POND. PRELIMINARY DISCUSSIONS WITH CITY HYDROLOGY DURING PROJECT DESIGN DETERMINED THAT ABSENT OF A SET CRITERIA FROM THE 1977 PLAN, THE DRAINAGE INTENT FOR THIS PROJECT SHALL BE TO OFFSET ANY DISPLACED VOLUME SO AS TO MAINTAIN THE EXISTING RETENTION PONDING CAPACITY OF THE SITE.

THE NEW DRIVEPAD ENTRANCE WILL RESULT IN INFILL OF AN EXISTING RETENTION POND IN ORDER TO PROVIDE ACCESS TO THE SITE. IN ORDER TO OFFSET THIS INFILL OF THE EXISTING POND, TWO NEW 48" CULVERT PIPES WILL BE INSTALLED BENEATH THE NEW ENTRANCE AND THE EXISTING RETENTION POND WILL BE REGRADED TO THE NORTH AND SOUTH OF THE NEW ENTRANCE. THE INCREASED CAPACITY FROM THE NEW CULVERTS AND THE REGRADED POND WILL OFFSET THE RETENTION VOLUME LOST BY THE CONSTRUCTION OF THE NEW ENTRANCE, THEREBY MAINTAINING THE EXISTING SITE RETENTION CAPACITY.

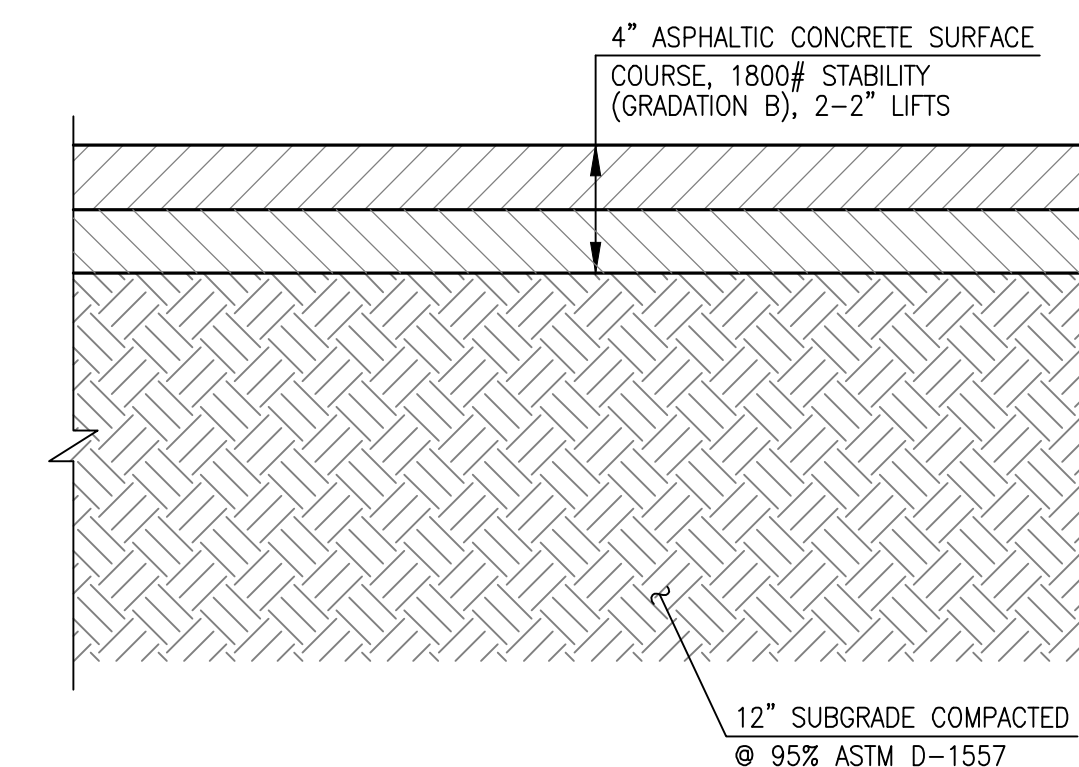
CALCULATIONS FOR THE MODIFIED RETENTION POND WERE PERFORMED USING THE AVERAGE END-AREA METHOD; THE RETENTION CAPACITY OF THE NEW CULVERTS WAS BASED ON THE EQUATION FOR VOLUME OF A CYLINDRICAL PIPE.

THIS SUBMITTAL IS MADE IN SUPPORT OF GRADING AND DRAINAGE PERMIT APPROVAL.



TYPICAL ANGULAR GRAVEL SLOPE PROTECTION SECTION

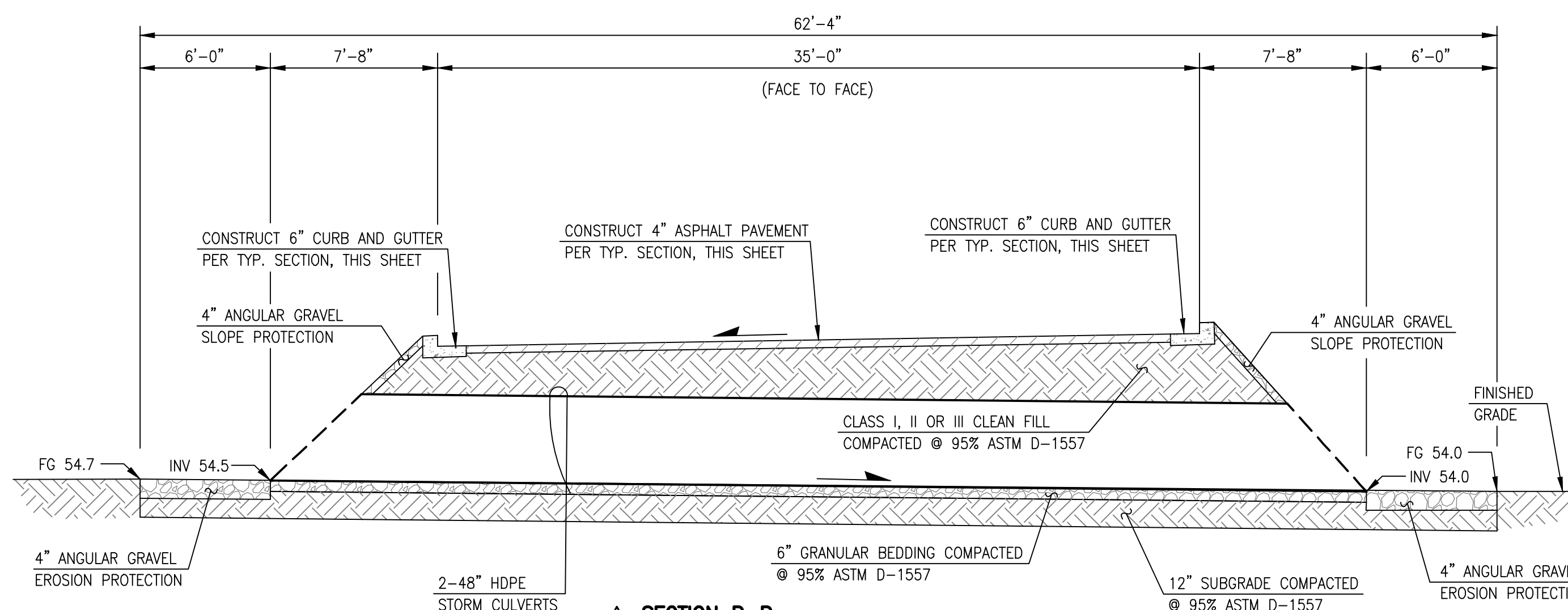
SCALE: 1" = 6"



TYPICAL 4" ASPHALT PAVING SECTION
SCALE: 1" = 6" (VEHICULAR TRAFFIC AREAS)

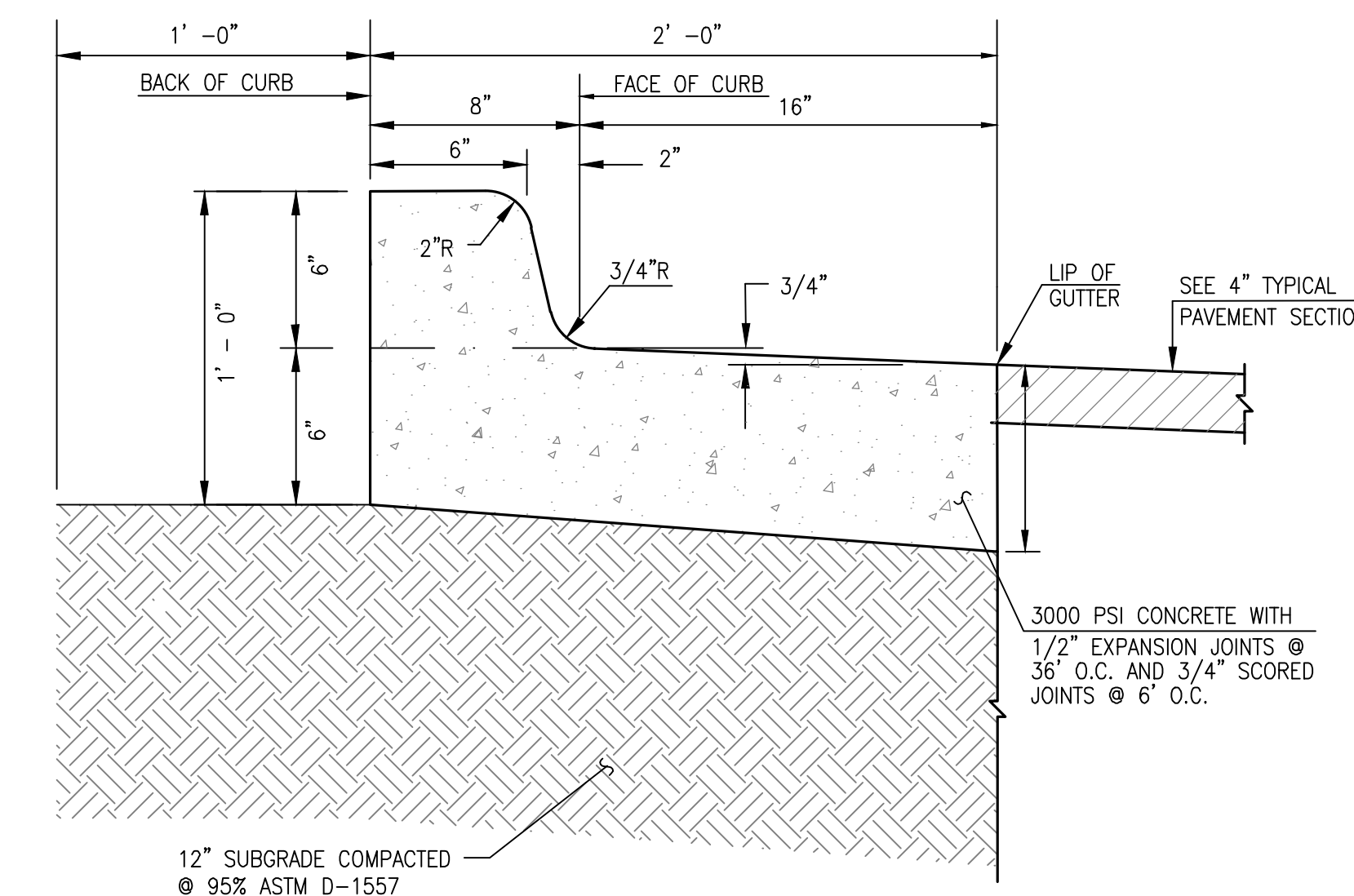
ROAD SECTION NOTE:

CONTRACTOR SHALL TEST SUBGRADE R-VALUE PRIOR TO CONSTRUCTION. IN THE EVENT THE R-VALUE IS LESS THAN 50, CONTRACTOR SHALL REMOVE 2 FT. OF SUBGRADE MATERIAL AND IMPORT SUITABLE MATERIAL WITH R-VALUE 50 OR GREATER.



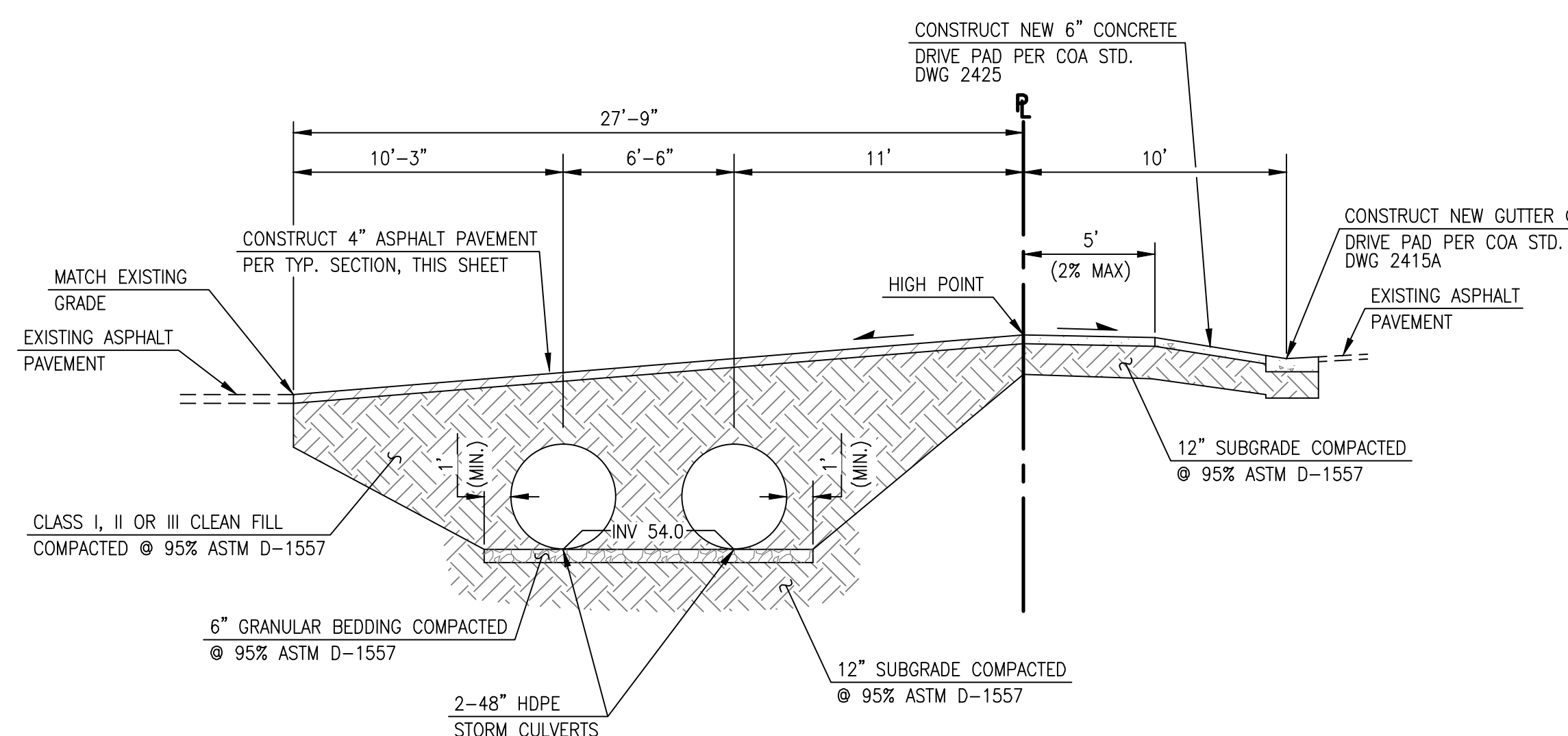
SECTION B-B

SCALE: 1" = 5'



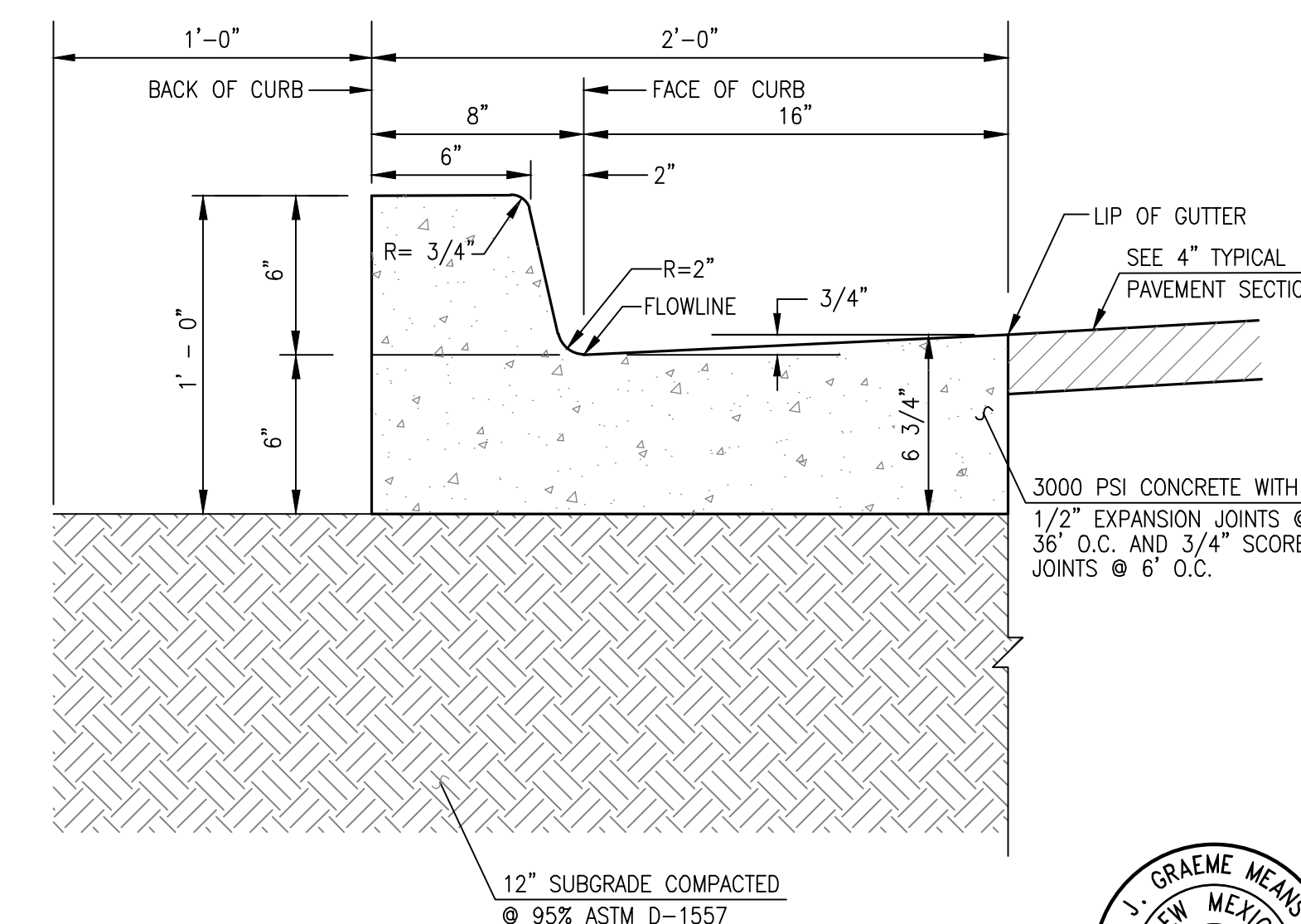
TYPICAL SIX-INCH DEPRESSED CURB & GUTTER

SCALE: 1" = 0'-6" NOTE: USE THIS SECTION FOR CASES WHERE PAVING SLOPES AWAY FROM FACE OF CURB



SECTION A-A

SCALE: 1" = 5'



TYPICAL SIX-INCH CURB & GUTTER

SCALE: 1" = 0'-6"



01-11-2018
09-28-2017

File Path: P:\MMA\2017\024\106\01\ Plot Date: 01-11-2018
File Name: 20170241_SH2_R1.DWG Plot Time: 09:14 am



8010-B Midway Park Blvd. NE • Albuquerque, New Mexico 87109
Phone: 505.345.4250 • Fax: 505.345.4254 • www.highmesacg.com

SECTIONS, DETAILS AND CALCULATIONS
EXPLORA SURPLUS PROPERTY DRIVEPAD

DESIGNED BY	ND	DATE	BY	REVISIONS		JOB NO.
				NO.	DATE	
J.D.S.	1	01/18	JDS	ADD	LONGITUDINAL SECTION B-B	2017.024.1
J.Y.R., S.C.C.						DATE 09-2017
G.M.						SHEET 2 OF 2

CALCULATIONS

DISPLACED RETENTION PONDING VOLUME

- OVERFLOW WSL = 60.8± (AT SOUTHWEST CORNER OF PROPERTY)
- PONDING VOLUME
- AREA OF EXISTING POND DISPLACED BY NEW DRIVEWAY = 2,650 (USING AVERAGE END-AREA METHOD)
- CULVERT VOLUME CAPACITY
- VOLUME OF 2-48" DIA. HDPE @ 38 LF = 955 CF
- TOTAL VOLUME DISPLACED = 2,650 - 955 = 1,695 CF

DEVELOPED RETENTION PONDING VOLUME

- 78 SF = EXISTING CROSS-SECTIONAL AREA OF DITCH TO BE REGRADED
- 107 SF = DEVELOPED CROSS-SECTIONAL AREA OF DITCH AFTER REGRADE
- 75 LF = LENGTH OF DITCH TO BE REGRADED
- EXISTING CAPACITY = 78 SF * 75 LF = 5,850 CF
- DEVELOPED CAPACITY = 107 SF * 75 LF = 8,025 CF
- ADDITIONAL CAPACITY = 8025 - 5850 = 2,175 CF INCREASED CAPACITY > 1,695 CF DISPLACED THEREFORE OK.

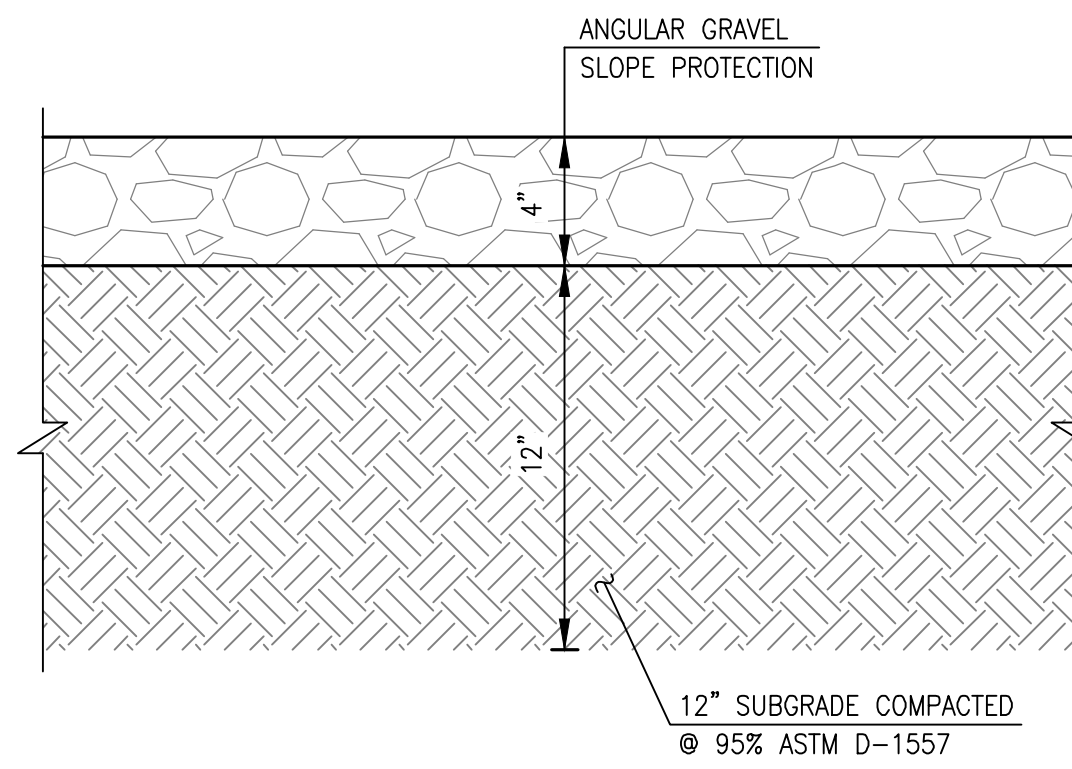
DRAINAGE PLAN

THE PROJECT SITE IS A NEW ENTRANCE TO AN EXISTING DEVELOPED PAVED SITE COMMERCIAL SITE WITHIN AN INFILL AREA. THE SITE IS LOCATED NEAR THE INTERSECTION OF 18TH STREET NW AND BELLAMAH AVE NW. THE PROPOSED PROJECT SCOPE IS TO CREATE A NEW DRIVEPAD ENTRANCE FROM 18TH STREET, ACROSS AN EXISTING PRIVATE RETENTION POND, TO SERVE THE EXISTING SITE. IN PREPARATION OF THIS PROJECT, THE 1977 PLAN OF RECORD FOR THE SITE WAS REVIEWED AND IT WAS NOTED THAT THIS PLAN DID NOT INCLUDE A DRAINAGE PLAN OR CALCULATIONS ESTABLISHING THE VOLUME OF THE RETENTION POND. PRELIMINARY DISCUSSIONS WITH CITY HYDROLOGY DURING PROJECT DESIGN DETERMINED THAT ABSENT OF A SET CRITERIA FROM THE 1977 PLAN, THE DRAINAGE INTENT FOR THIS PROJECT SHALL BE TO OFFSET ANY DISPLACED VOLUME SO AS TO MAINTAIN THE EXISTING RETENTION PONDING CAPACITY OF THE SITE.

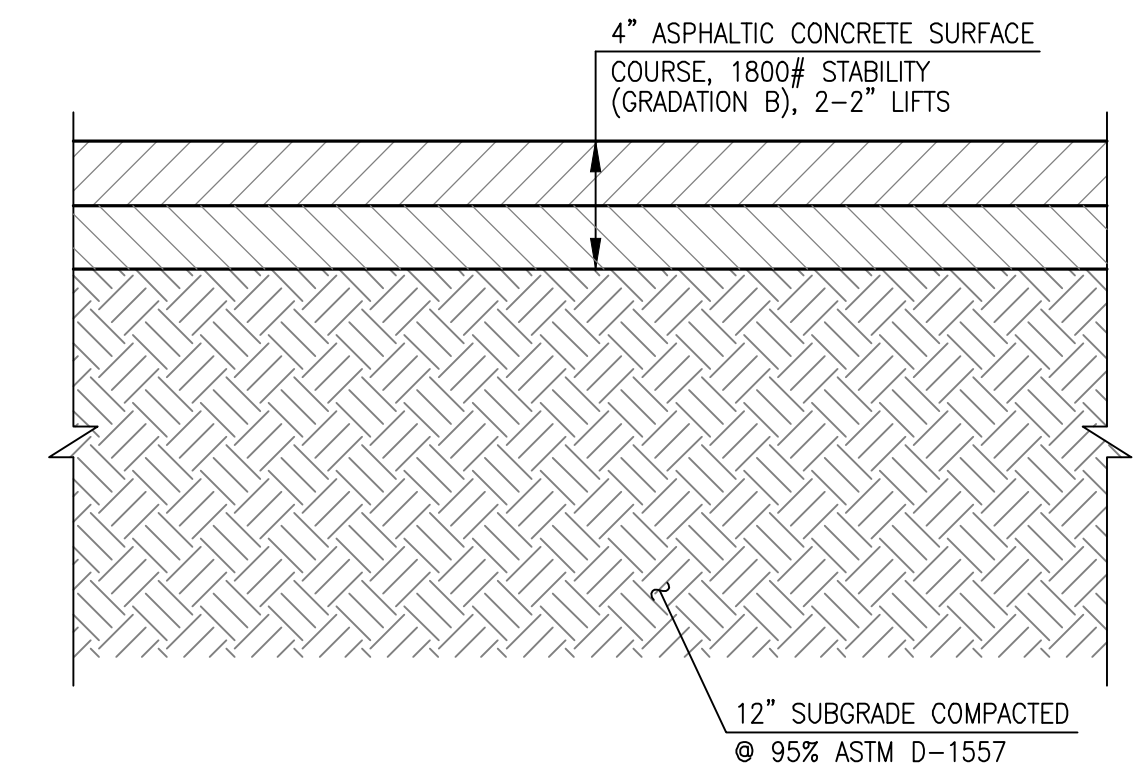
THE NEW DRIVEPAD ENTRANCE WILL RESULT IN INFILL OF AN EXISTING RETENTION POND IN ORDER TO PROVIDE ACCESS TO THE SITE. IN ORDER TO OFFSET THIS INFILL OF THE EXISTING POND, TWO NEW 48" CULVERT PIPES WILL BE INSTALLED BENEATH THE NEW ENTRANCE AND THE EXISTING RETENTION POND WILL BE REGRADED TO THE NORTH AND SOUTH OF THE NEW ENTRANCE. THE INCREASED CAPACITY FROM THE NEW CULVERTS AND THE REGRADED POND WILL OFFSET THE RETENTION VOLUME LOST BY THE CONSTRUCTION OF THE NEW ENTRANCE, THEREBY MAINTAINING THE EXISTING SITE RETENTION CAPACITY.

CALCULATIONS FOR THE MODIFIED RETENTION POND WERE PERFORMED USING THE AVERAGE END-AREA METHOD; THE RETENTION CAPACITY OF THE NEW CULVERTS WAS BASED ON THE EQUATION FOR VOLUME OF A CYLINDRICAL PIPE.

THIS SUBMITTAL IS MADE IN SUPPORT OF GRADING AND DRAINAGE PERMIT APPROVAL.

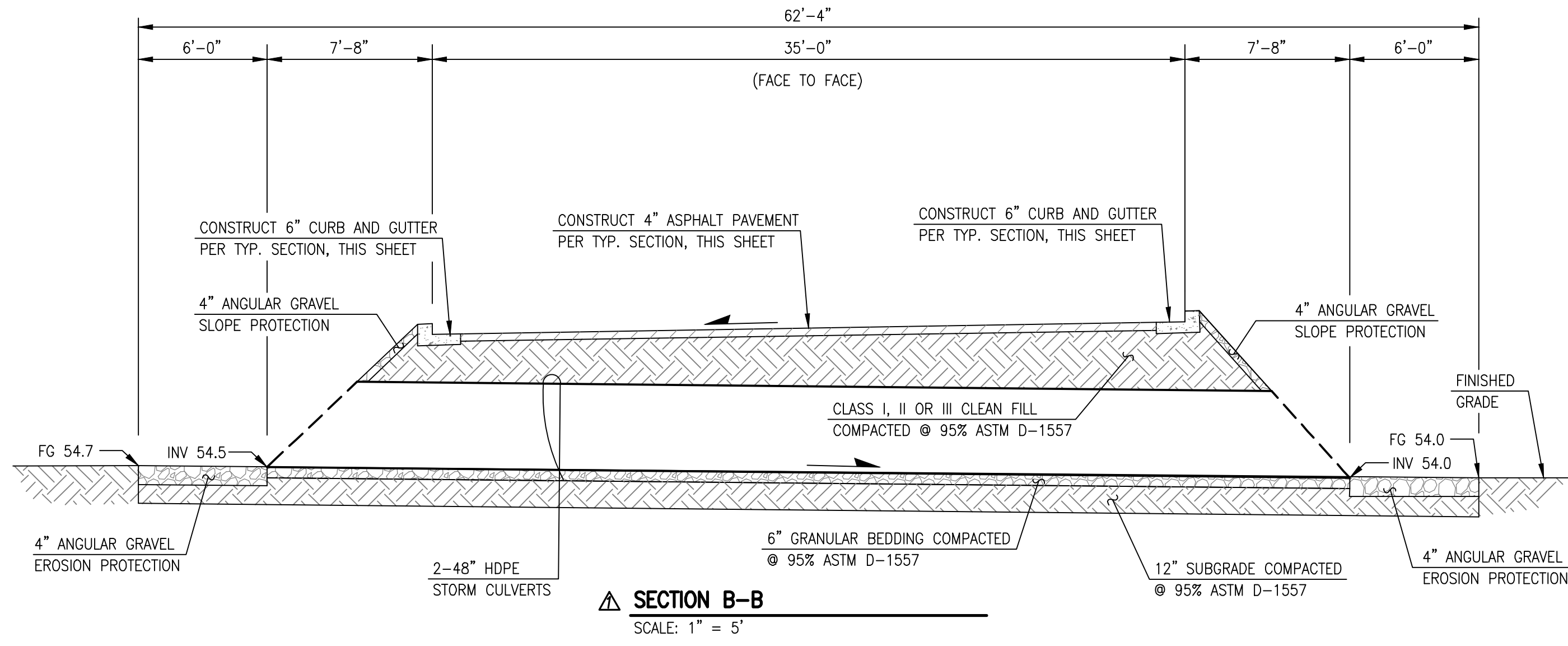


TYPICAL ANGULAR GRAVEL SLOPE PROTECTION SECTION
SCALE: 1" = 6"

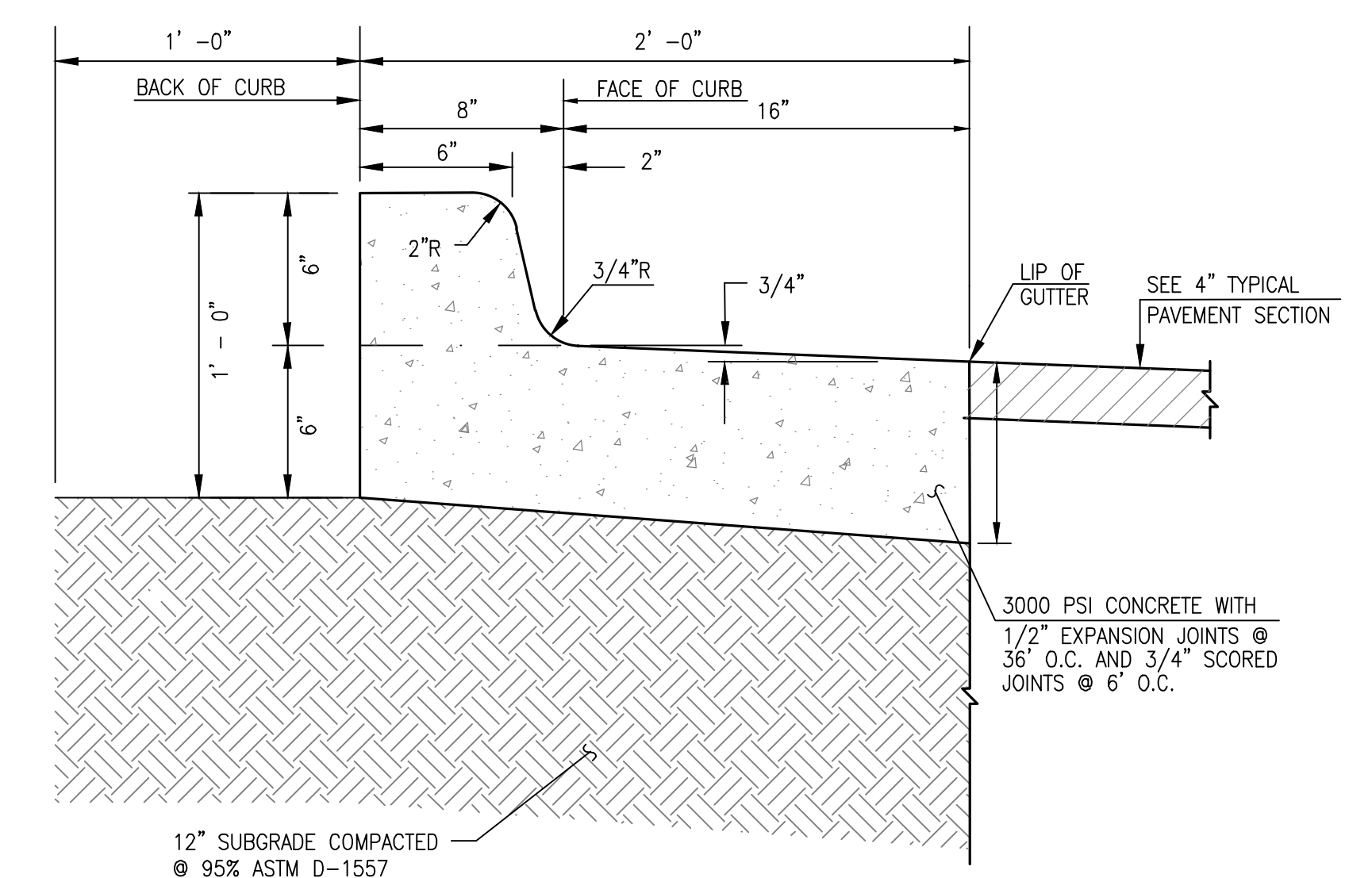


TYPICAL 4" ASPHALT PAVING SECTION
SCALE: 1" = 6" (VEHICULAR TRAFFIC AREAS)

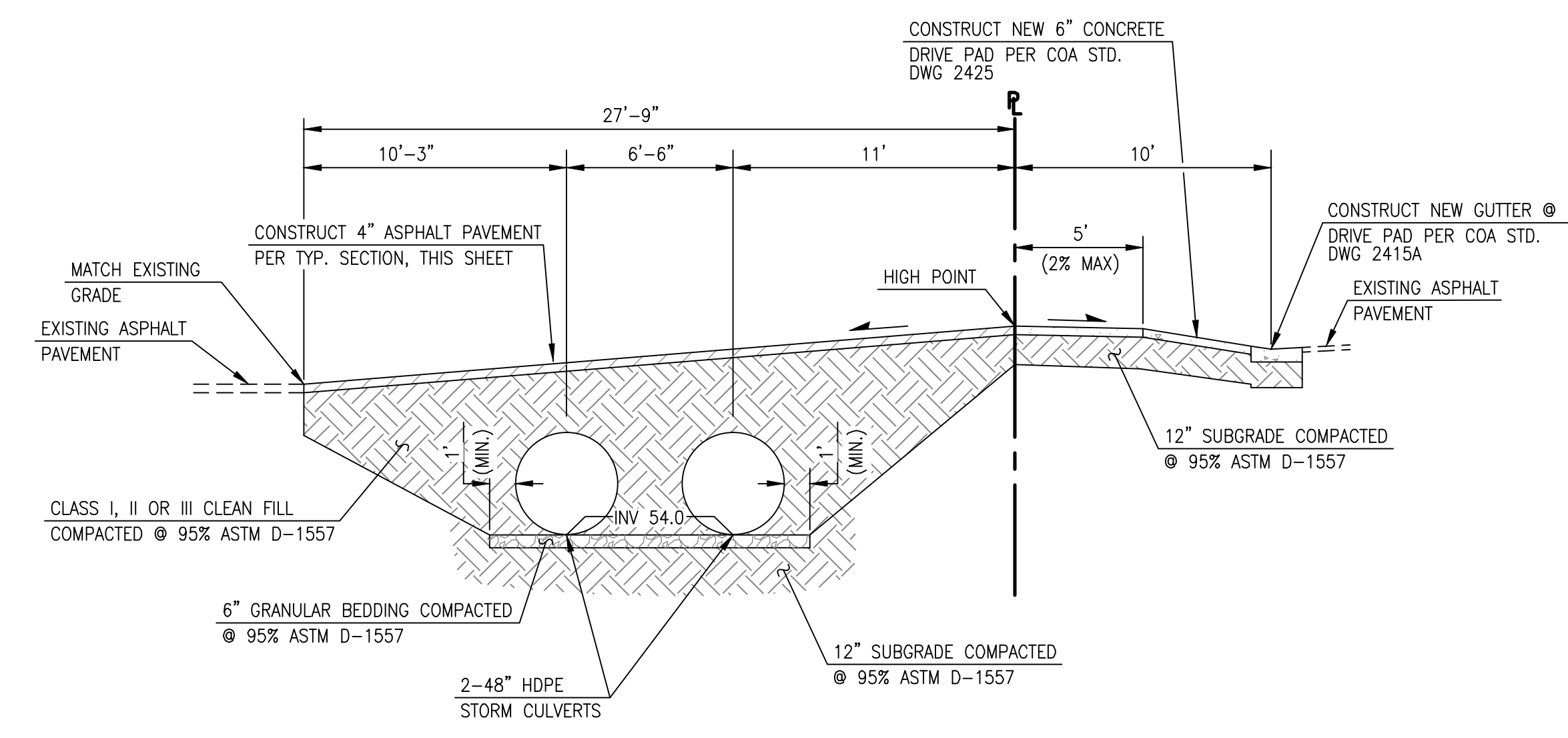
ROAD SECTION NOTE:
CONTRACTOR SHALL TEST SUBGRADE R-VALUE PRIOR TO CONSTRUCTION. IN THE EVENT THE R-VALUE IS LESS THAN 50, CONTRACTOR SHALL REMOVE 2 FT. OF SUBGRADE MATERIAL AND IMPORT SUITABLE MATERIAL WITH R-VALUE 50 OR GREATER.



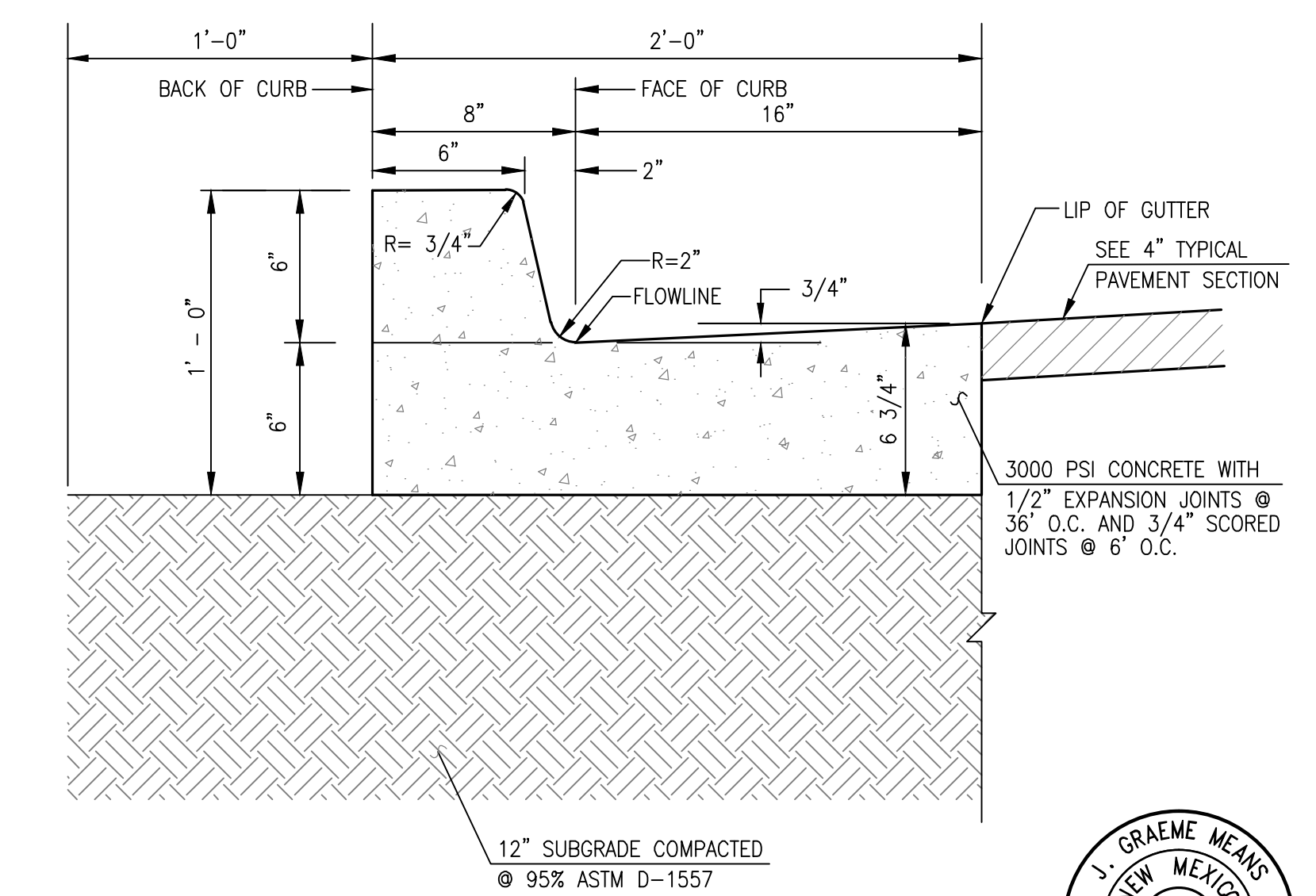
SECTION B-B
SCALE: 1" = 5'



TYPICAL SIX-INCH DEPRESSED CURB & GUTTER
SCALE: 1" = 0'-6" NOTE: USE THIS SECTION FOR CASES WHERE PAVING SLOPES AWAY FROM FACE OF CURB



SECTION A-A
SCALE: 1" = 5'



TYPICAL SIX-INCH CURB & GUTTER
SCALE: 1" = 0'-6"



01-11-2018
09-28-2017

File Path: P:\MMA\2017\024\196\911_Plot Date: 01-11-2018
File Name: 20170241_SH2_R1.DWG Plot Time: 09:14 am

DESIGNED BY	DATE	BY	REVISIONS		JOB NO.
			NO.	DATE	
J.D.S.	01/18	JDS	ADD	LONGITUDINAL SECTION B-B	2017.024.1
J.Y.R., S.C.C.					DATE 09-2017
G.M.					SHEET 2 OF 2