CITY OF ALBUQUERQUE

Richard J. Berry, Mayor

November 24, 2015

Fred C. Arfman
Isaacson & Arfman, P.A.
128 Monroe Street NE
Albuquerque, NM, 87108

RE: **Santa Monica Place (Senior Assisted Living/Memory Care)**
East End of Tract 3
Grading and Drainage Plan
Engineer's Stamp Date 10-16-2015 (File: D18D054B)

Dear Mr. Arfman:

Based upon the information provided in your submittal received 10-23-2015, the above-referenced plan is approved for SO-19 Permit. The Grading Permit and Building Permit are approved with the following conditions:

- Specify class IV RCP for the 24" storm drain that will be placed under the retaining wall (or other class only if justified).
- It is assumed that the hatched rectangles shown within the ponds are the percolation pits referenced in Keyed Note 7 on Sheet CG-101.

Please attach a copy of this approved 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 924-3986.

Sincerely,

Abiel Carrillo, P.E.
Principal Engineer, Planning Dept.
Development Review Services

Orig: Drainage file

D18D054B_SO19_BP_GP_APPR.docx

PO Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

Project Title: Elan - Santa Monica Place (Senior Assisted Living/Memory Care) Building Permit #: _____ City Drainage #: D18 D054B

DRB#: 1003916 EPC#: _____ Work Order#: _____

Legal Description: The Eastern Portion of Tract 3, Santa Monica Place

City Address: _____

Engineering Firm: Isaacson & Arfman, P.A. Contact: Åsa Nilsson-Weber

Address: 128 Monroe Street NE - Albuquerque, NM 87108

Phone#: (505) 268-8828 Fax#: _____ E-mail: asaw@iacivil.com

Owner: Del Rey Investments, LLC Contact: Kurt Browning

Address: 6300 Riverside Plaza Lane NW, Suite 200 - Albuquerque, NM 87120

Phone#: (505) 998-0163 Fax#: _____ E-mail: _____

Architect: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Surveyor: Surv-Tek, Inc. Contact: Russ P. Hugg

Address: 9384 Valley View Drive NW - Albuquerque, NM 87114

Phone#: (505) 897-3366 Fax#: (505) 897-3377 E-mail: _____

Contractor: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

TYPE OF SUBMITTAL:

- X DRAINAGE REPORT
- ___ DRAINAGE PLAN 1st SUBMITTAL
- X DRAINAGE PLAN RESUBMITTAL
- ___ CONCEPTUAL G & D PLAN
- X GRADING PLAN
- ___ EROSION & SEDIMENT CONTROL PLAN (ESC)
- ___ ENGINEER'S CERT (HYDROLOGY)
- ___ CLOMR/LOMR
- ___ TRAFFIC CIRCULATION LAYOUT (TCL)
- ___ ENGINEER'S CERT (TCL)
- ___ ENGINEER'S CERT (DRB SITE PLAN)
- ___ ENGINEER'S CERT (ESC)
- ___ SO-19
- ___ OTHER (SPECIFY)

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- ___ SIA/FINANCIAL GUARANTEE RELEASE
- ___ PRELIMINARY PLAT APPROVAL
- ___ S. DEV. PLAN FOR SUB'D APPROVAL
- ___ S. DEV. FOR BLDG. PERMIT APPROVAL
- ___ SECTOR PLAN APPROVAL
- ___ FINAL PLAT APPROVAL
- ___ CERTIFICATE OF OCCUPANCY (PERM)
- ___ CERTIFICATE OF OCCUPANCY (TCL TEMP)
- ___ FOUNDATION PERMIT APPROVAL
- X BUILDING PERMIT APPROVAL
- X GRADING PERMIT APPROVAL
- ___ PAVING PERMIT APPROVAL
- ___ WORK ORDER APPROVAL
- ___ GRADING CERTIFICATION
- X SO-19 APPROVAL
- ___ ESC PERMIT APPROVAL
- ___ ESC CERT. ACCEPTANCE
- ___ OTHER (SPECIFY)

RECEIVED
OCT 23 2015
LAND DEVELOPMENT SECTION

WAS A PRE-DESIGN CONFERENCE ATTENDED: ___ Yes ___ No ___ Copy Provided

DATE SUBMITTED: June 10, 2015 By: Fred Arfman
Isaacson & Afrman, P.A.

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location, and scope to the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the followin

1. **Conceptual Grading and Drainage Plan**: Required for approval of Site Development Plans greater than five (5) acres and Sector Plans
2. **Drainage Plans**: Required for building permits, grading permits, paving permits and site plans less than five (5) acres
3. **Drainage Report**: Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more
4. **Erosion and Sediment Control Plan:** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development

OCTOBER 1, 2015

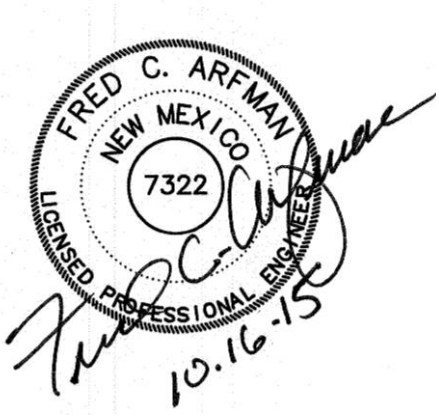
Supplemental Information for

for

TRACT 3-B
SANTA MONICA PLACE
DRAINAGE AND GRADING PLAN

I&A PROJECT NO. 2047

By



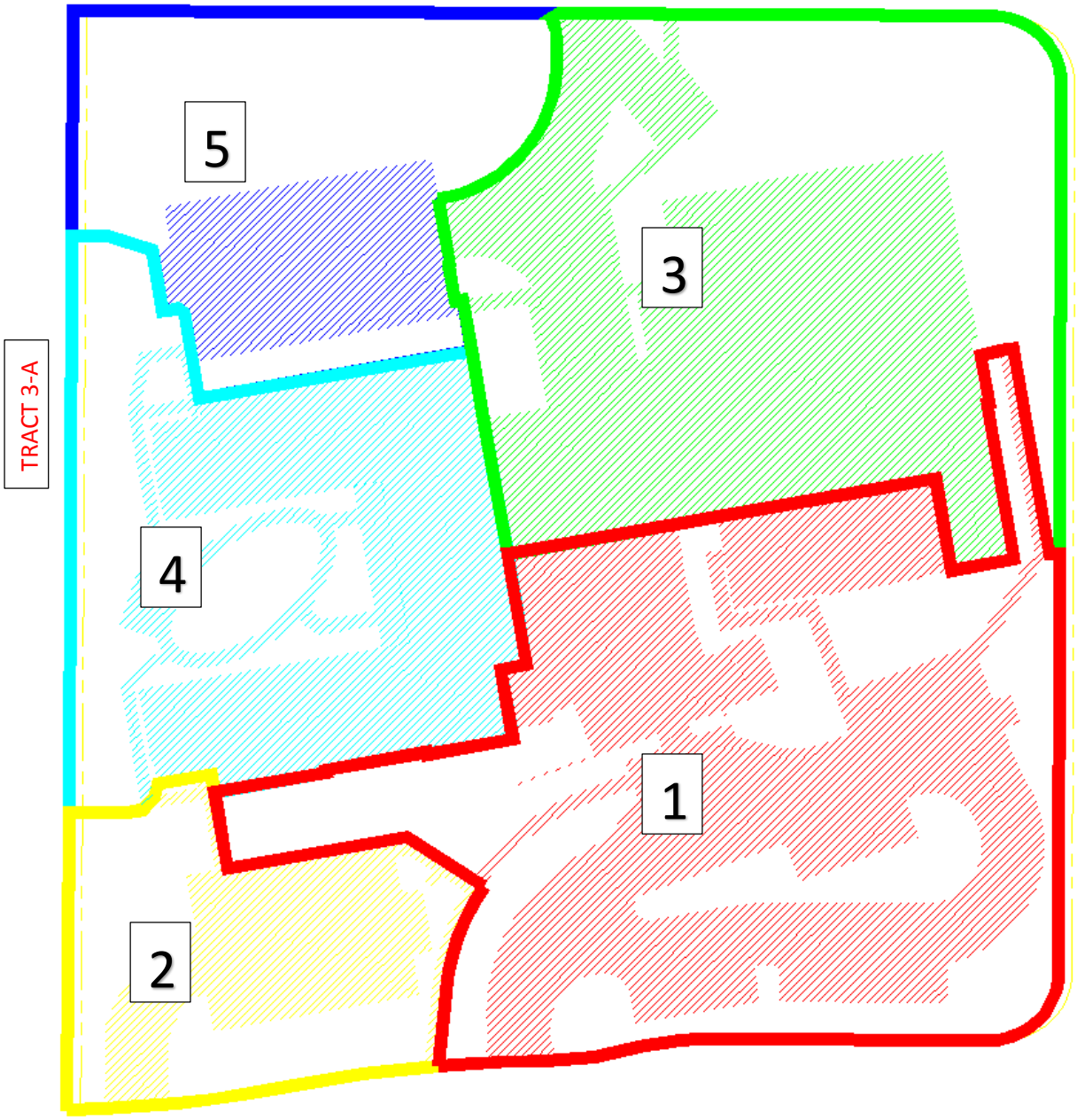
ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates

Thomas O. Isaacson, PE(RET.) & LS(RET.)
Fred C. Arfman, PE
Åsa Nilsson-Weber, PE

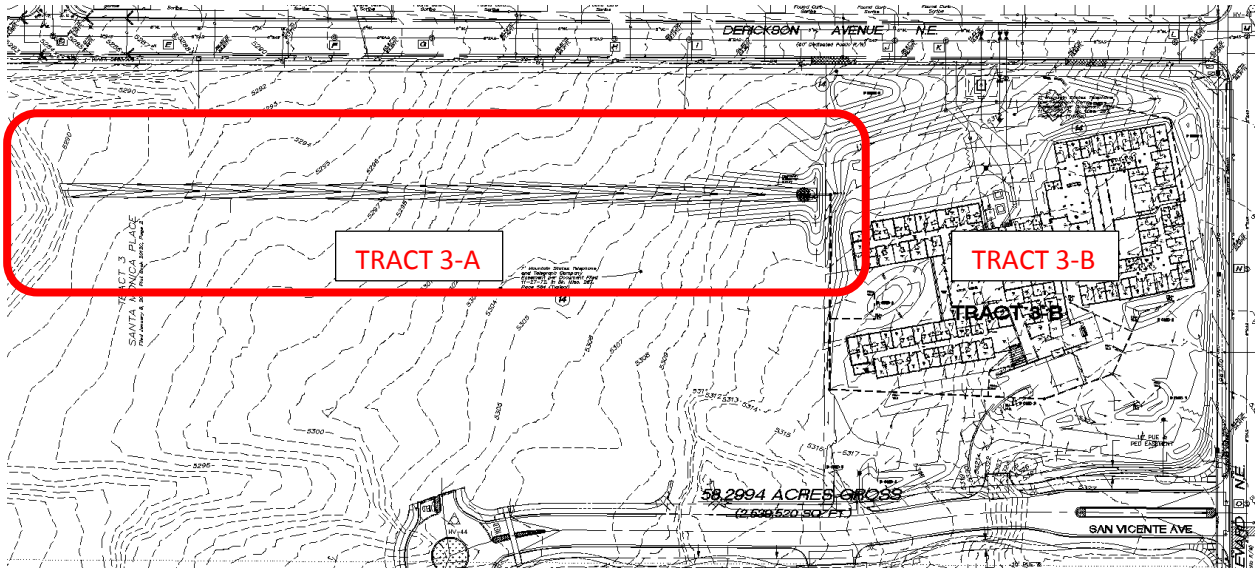
DRAINAGE BASINS

DRAINAGE BASINS WITH

IMPERVIOUS AREAS:



PERMISSION TO GRADE ON TRACT 3-A GRANTED BY PLAT



DRAINAGE EASEMENT NOTES

A. *There is an existing interim Cross Lot Drainage Easement granted by plat filed January 6, 2012 in Plat Book 2012C, Page 2 for the mutual benefit of the owners of Tracts 1 thru 4 until future development occurs. Tracts 1 thru 4 will discharge drainage to the existing drainage facilities/outfalls located at the intersection of Derickson and San Pedro as outlined in the Conceptual Drainage Report prepared by Isaacson & Arfman, P.A. dated 12–2–11. Owners/Developers of any of the tracts are allowed to grade interim drainage facilities such as grading, berming, ponding or outfall structures on adjacent undeveloped property and will be maintained by the benefiting tract owner until such time that future development (TBD) of the undeveloped property is complete and applicable interim facilities are no longer required. Notwithstanding anything herein to the contrary, the interim Cross Lot Drainage Easement may not be terminated without the approval of the City Engineer.*

Said Easement within Tracts 3 and 4, Santa Monice Place is VACATED by 14DRB–_____.

B. *A New Public and Private Interim Drainage Easement shall be granted by this plat over Tract 3–A, for the benefit of Tracts 3–B, 4–A and 4–B. Owners of said Tracts 3–B, 4–A and 4–B shall be allowed to grade Interim Drainage Facilities on Tract 3–A. Said Interim Drainage Facilities shall be maintained by the owner of Tract 3–A until such time that future development (TBD) of Tract 3–B is complete and applicable Interim Facilities are no longer required.*

DRAINAGE BASIN / FIRST FLUSH CALCULATIONS

.open

BASIN NO. 1		DESCRIPTION	TO SOUTH STORM DRAIN
Area of basin flows =	62758 SF	=	1.4 Ac.

			LAND TREATMENT	
First Flush Volume	=	Basin Area	A =	0%
	x	% Impervious	B =	22%
	x	0.34" / 12	C =	22%
FIRST FLUSH VOL.	=	**996 CF**	D =	56%

BASIN NO. 2		DESCRIPTION	TO SAN VICENTE AVE
Area of basin flows =	19099 SF	=	0.4 Ac.

			LAND TREATMENT	
First Flush Volume	=	Basin Area	A =	0%
	x	% Impervious	B =	24%
	x	0.34" / 12	C =	24%
FIRST FLUSH VOL.	=	**281 CF**	D =	52%

BASIN NO. 3		DESCRIPTION	TO DERICKSON AVE. VIA ACCESS DRIVE
Area of basin flows =	53746 SF	=	1.2 Ac.

			LAND TREATMENT	
First Flush Volume	=	Basin Area	A =	0%
	x	% Impervious	B =	18%
	x	0.34" / 12	C =	18%
FIRST FLUSH VOL.	=	**975 CF**	D =	64%

BASIN NO. 4		DESCRIPTION	TO WEST STORM DRAIN
Area of basin flows =	35828 SF	=	0.8 Ac.

			LAND TREATMENT	
First Flush Volume	=	Basin Area	A =	0%
	x	% Impervious	B =	19%
	x	0.34" / 12	C =	19%
FIRST FLUSH VOL.	=	**629 CF**	D =	62%

BASIN NO. 5		DESCRIPTION	TO DERICKSON AVE. VIA SIDEWALK CULVERTS
Area of basin flows =	26901 SF	=	0.6 Ac.

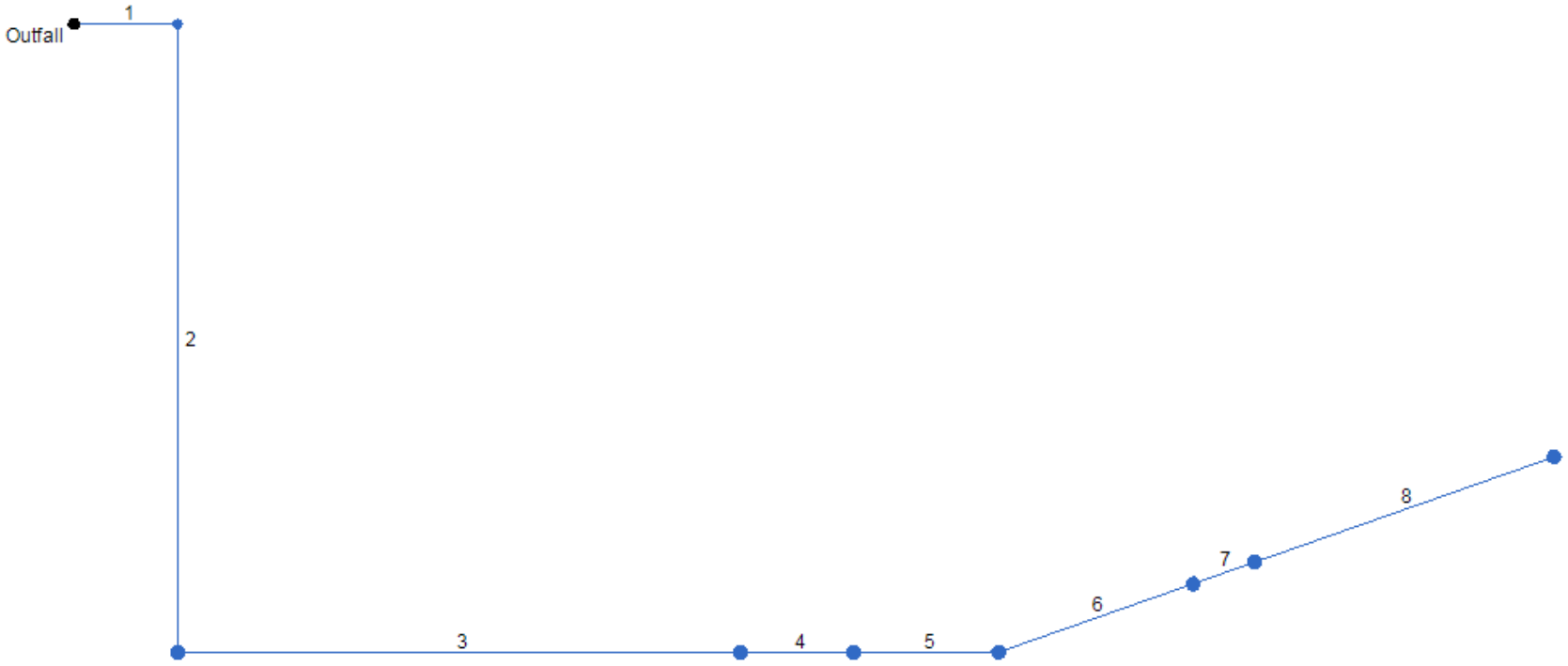
			LAND TREATMENT	
First Flush Volume	=	Basin Area	A =	0%
	x	% Impervious	B =	34%
	x	0.34" / 12	C =	34%
FIRST FLUSH VOL.	=	**244 CF**	D =	32%

```
AHYMO PROGRAM SUMMARY TABLE (AHYMO-S4)                    - Ver. S4.01a, Rel: 01a      RUN DATE (MON/DAY/YR) =05/12/2015
INPUT FILE = m:\PROJECTS\2000-2099\2047\CALCS\2047DEV.DAT                              USER NO.= AHYMO_Temp_User:20122010

                                FROM  TO                    PEAK         RUNOFF              TIME TO    CFS      PAGE =   1
                    HYDROGRAPH   ID   ID         AREA     DISCHARGE      VOLUME      RUNOFF     PEAK     PER
COMMAND       IDENTIFICATION    NO.  NO.      (SQ MI)      (CFS)        (AC-FT)    (INCHES)  (HOURS)    ACRE     NOTATION

*S*************************************************************************
*S           SANTA MONICA PLACE
*S           TRACT 3-B
*S           100-YEAR, 6-HOUR STORM
*S           2047DEV.DAT
*S
*S           BY BRYAN BOBRICK
*S           ISAACSON & ARFMAN, P.A.
*S           MAY, 2015
*S*************************************************************************
*S
*S    Rainfall distribution based on NOAA Atlas 14 maps
*S      Latitude=35.1625   Longitude=-106.5741
*S
*S*************************************************************************
START                                                                                                    TIME=      0.00
RAINFALL  TYPE= 1 NOAA 14                                                                                RAIN6=    2.410
*S      BASIN 1
COMPUTE NM HYD            S1   -     1       0.00225         5.21       0.194      1.61419    1.533    3.616 PER IMP=  56.00
*S      BASIN 2
COMPUTE NM HYD            S2   -     2       0.00069         1.57       0.057      1.56517    1.533    3.580 PER IMP=  52.00
*S      BASIN 3
COMPUTE NM HYD            S3   -     3       0.00193         4.62       0.176      1.71224    1.533    3.745 PER IMP=  64.00
*S      BASIN 4
COMPUTE NM HYD            S4   -     4       0.00129         3.06       0.116      1.68773    1.533    3.720 PER IMP=  62.00
*S      BASIN 5
COMPUTE NM HYD            S5   -     5       0.00096         2.01       0.068      1.32004    1.533    3.250 PER IMP=  32.00
FINISH
```

Hydraflow Storm Sewers Extension for Autodesk® AutoCAD® Civil 3D® Plan



Project File: 2047 Elan South.stm	Number of lines: 8	Date: 10/1/2015

Hydraulic Grade Line Computations

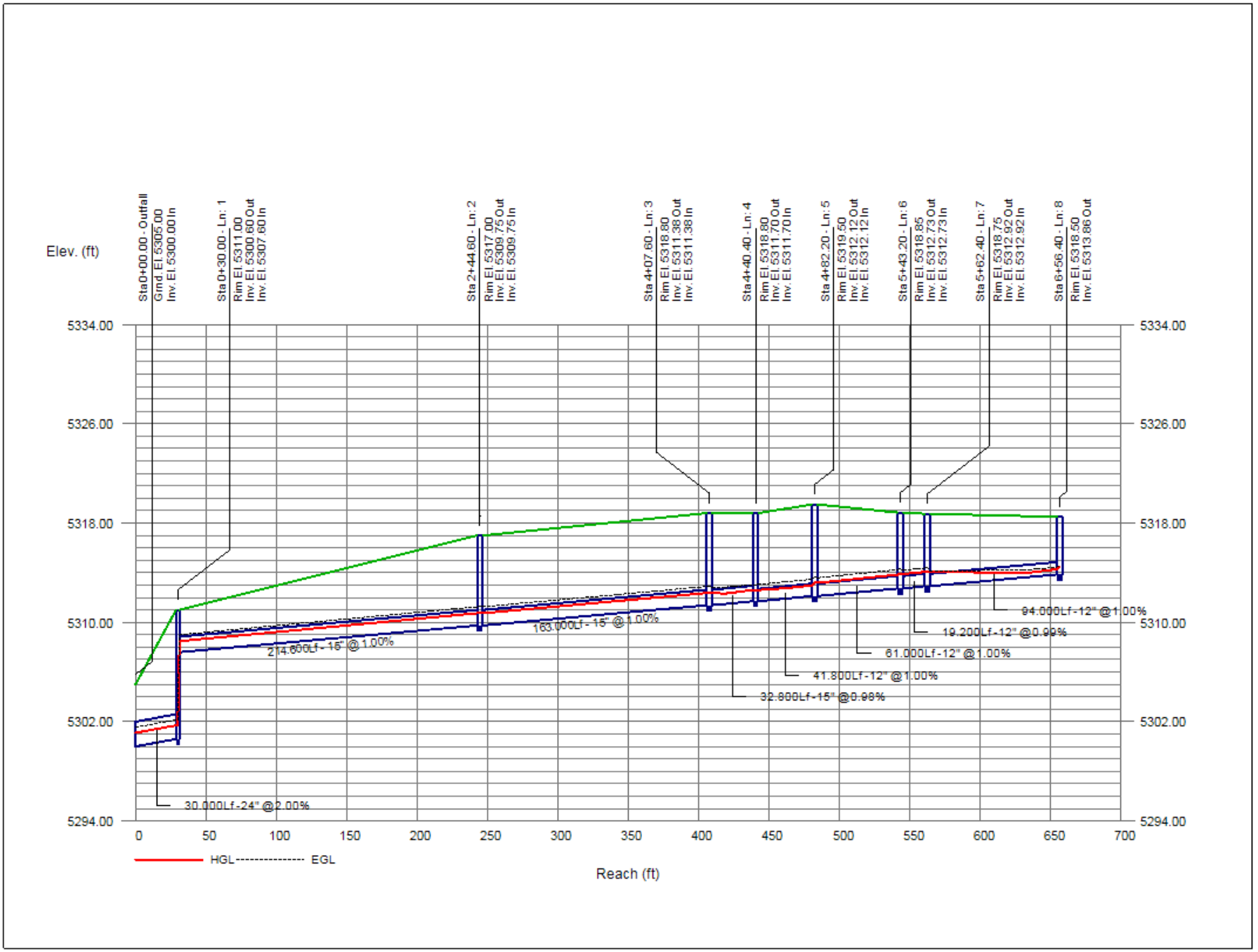
Line	Size	Q	Downstream								Len	Upstream								Check		JL coeff	Minor loss
			Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf		Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf	Ave Sf	Enrgy loss		
	(in)	(cfs)	(ft)	(ft)	(ft)	(sqft)	(ft/s)	(ft)	(ft)	(%)	(ft)	(ft)	(ft)	(ft)	(sqft)	(ft/s)	(ft)	(ft)	(%)	(%)	(ft)	(K)	(ft)
1	24	9.50	5300.00	5301.10	1.10	1.77	5.37	0.45	5301.55	0.000	30.000	5300.60	5301.70	1.10**	1.77	5.36	0.45	5302.15	0.000	0.000	n/a	1.50	0.67
2	15	6.00	5307.60	5308.49	0.89*	0.94	6.41	0.52	5309.01	0.000	214.600	5309.75	5310.74	0.99**	1.04	5.76	0.52	5311.26	0.000	0.000	n/a	1.00	0.52
3	15	6.00	5309.75	5310.74	0.99*	1.04	5.76	0.52	5311.26	0.000	163.000	5311.38	5312.37	0.99**	1.04	5.76	0.52	5312.89	0.000	0.000	n/a	0.15	0.08
4	15	5.00	5311.38	5312.37	0.99	0.95	4.80	0.43	5312.80	0.000	32.800	5311.70	5312.61 j	0.91**	0.95	5.25	0.43	5313.04	0.000	0.000	n/a	0.15	n/a
5	12	4.00	5311.70	5312.61	0.91	0.71	5.35	0.44	5313.05	0.942	41.800	5312.12	5312.97 j	0.85**	0.71	5.63	0.49	5313.46	1.015	0.978	0.409	0.44	0.22
6	12	4.00	5312.12	5313.19	1.00	0.79	5.09	0.40	5313.59	1.075	61.000	5312.73	5313.84	1.00	0.79	5.09	0.40	5314.25	1.075	1.075	0.656	0.15	0.06
7	12	3.50	5312.73	5313.90	1.00	0.79	4.46	0.31	5314.21	0.823	19.200	5312.92	5314.06	1.00	0.79	4.46	0.31	5314.37	0.823	0.823	0.158	0.15	0.05
8	12	1.00	5312.92	5314.11	1.00	0.31	1.27	0.03	5314.13	0.067	94.000	5313.86	5314.28 j	0.42**	0.32	3.17	0.16	5314.44	0.486	0.277	0.260	1.00	0.16

Project File: 2047 Elan South.stm | Number of lines: 8 | Run Date: 10/1/2015

Notes: * Normal depth assumed.; ** Critical depth.; j-Line contains hyd. jump. ; c = cir e = ellip b = box

Storm Sewer Profile

Proj. file: 2047 Elan South.stm



APPENDIX:

- **Excerpts from the Master Drainage Report dated October 9, 2014**
  - **Cover**
  - **Proposed Conditions with comparison inset**
  - **Tract 3-B and 4-B Construction**
  - **Summary**

OCTOBER 9, 2014

MASTER DRAINAGE REPORT

Update to Master Drainage Report for Santa Monica Place, dated 02/21/12

FOR

TRACTS 3-A, 3-B, 4-A, & 4-B
SANTA MONICA PLACE
(Replat of Tracts 3 & 4, Santa Monica Place)

Louisiana Blvd. and Derickson Ave. NE

Åsa Nilsson-Weber, P.E. Date

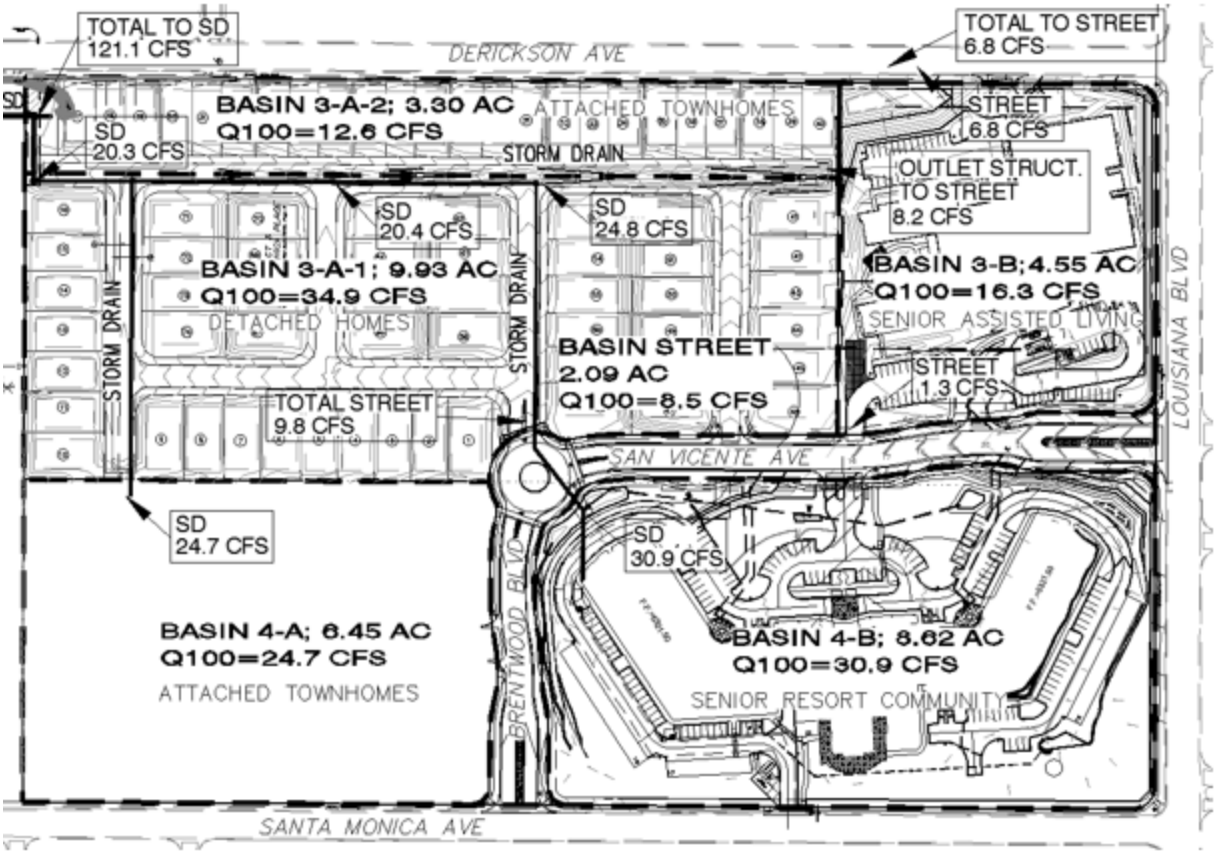
ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
Thomas O. Isaacson, PE & LS [Ret.]
Fred C. Arfman, PE
Åsa Nilsson-Weber, PE

IV. PROPOSED CONDITIONS

Tract 3-B will be developed as an assisted living facility and Tract 4-B as a senior resort. Site plans and preliminary grading plans have been developed for both tracts. Tract 4-A will be developed with attached townhomes—there is currently no site plan for this tract. Tract 3-A will be developed with a mixture of attached townhomes and detached single-family homes—a preliminary layout has been developed.

San Vicente Ave. / Brentwood Blvd. will be constructed, including any required storm drain, rundowns and utilities. Work order plans are in the process of being prepared.

The 100-yr, 6-hr flow rates for each tract were calculated using AHYMO based on NOAA Atlas 14 rainfall data and assigned land treatments—see Appendix A. Tract 3-A was split into two basins—3-A-1 (single detached homes) and 3-A-2 (attached townhomes). The land treatments were based on the site plans for Tracts 3-B and 4-B, and per Table 5 from DPM Section 22.2 for the remaining tracts—see Appendix A.



Proposed Basin Exhibit

Per the AHYMO calculations for the developed property:
Q100 to Derickson (Basins 3 and 5) = 6.63 cfs (allowable = 6.8 cfs)
Q100 west (Basins 1 and 4) = 8.27 cfs (allowable = 8.2 cfs)
Q100 south to San Vicente Ave. (Basin 2) = 1.57 cfs (allowable = 1.3 cfs).

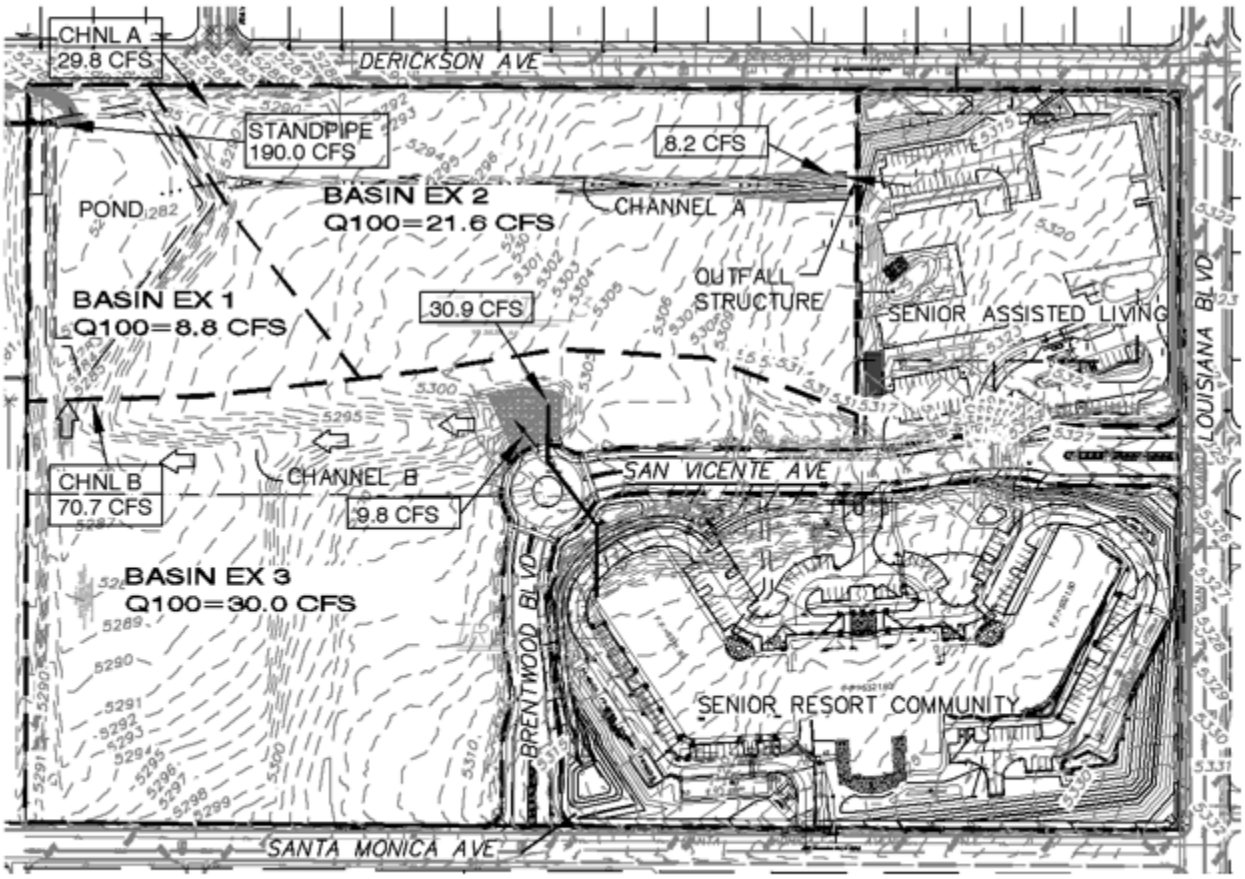
The minor difference in discharge to San Vicente Ave. and to the west storm drain will be factored into the final design for the future storm system (same owner).

TRACTS 3-B AND TRACT 4-B CONSTRUCTION

When Tract 3-B develops, an outfall structure shall be constructed to convey flows to the west at the future roadway alignment in Tract 3-A. An interim channel (Channel A) shall be graded to convey flows to the pond. See Appendix B for channel capacity calculations.

Upon development of Tract 4-B, the temporary standpipe shall be removed and the onsite storm drain system shall be connected to the 18" storm drain installed with the San Vicente Ave. and Brentwood Blvd. construction. The storm drain will continue to discharge into the existing channel and be directed to the pond via the existing channel (Channel B). The channel calculations were based on the narrowest section of the channel. See Appendix B for channel capacity calculations. Velocities in both channels are approximately 4.5 fps, which is non-erosive.

The earthen channels shall be maintained by the Owner of Tract 3-A until the subdivision storm drain system is constructed.



Interim Drainage Exhibit—Tracts 3-B and 4-B Construction

VI. SUMMARY

The following items shall be required for construction of each tract / street. Improvements are listed in the anticipated order of development of each tract.

SAN VICENTE AVE. / BRENTWOOD BLVD.

- *Submit an interim grading & drainage plan to support the Public Work Order.*

- Install a manhole and 24" storm drain (public) under roundabout.
- Install an 18" storm drain and a temporary standpipe (private) on Tract 4-B.
- Outlet erosion control north of the roundabout at Channel B.

TRACT 3-B

- *Submit a grading & drainage plan including interim offsite channel grades to support the Building Permit.*

- Construct outfall structure to convey flows west.
- Construct Channel A from Tract 3-B to the existing pond.

TRACT 4-B

- *Submit a grading & drainage plan to support the Building Permit.*

- Remove temporary standpipe on Tract 4-B and connect the new onsite storm drain to the 18" storm drain installed with San Vicente Ave. and Brentwood Blvd. improvements.

TRACT 4-A

- *Submit a grading & drainage plan to support the Public Work Order and Building Permit.*
- *Submit a drainage report with hydrology/hydraulic calculations including storm drain calculations.*

- Install a storm drain stub to Tract 3-A for interim discharge to pond.
- Construct the infrastructure required for the development.

TRACT 3-A

- *Submit a grading & drainage plan to support the Public Work Order and Building Permit Plans.*
- *Submit a drainage report with hydrology/hydraulic calculations, including storm drain calculations.*

- Remove the rock in Channel B, existing pond and temporary standpipe.
- Construct the infrastructure required for the development, including the ultimate storm drain system.

GENERAL GRADING AND DRAINAGE NOTES

A. ALL CIVIL WORK DETAILED ON THESE PLANS AND PERFORMED UNDER THIS CONTRACT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT. WHERE APPLICABLE, CITY OF ALBUQUERQUE SPECIFICATIONS AND DETAILS.

B. THE CONTRACTOR SHALL ABIDE BY ALL STATE, LOCAL, AND FEDERAL LAWS, CODES, RULES AND REGULATIONS WHICH APPLY TO THE CONSTRUCTION OF THESE IMPROVEMENTS, INCLUDING EPA AND ADA REQUIREMENTS.

C. ALL SUBGRADE, OVEREXCAVATION, BACKFILL, AND FILL SHALL BE PLACED AND / OR COMPACTED PER THE GEOTECHNICAL REPORT .

D. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS FOR THE PROJECT PRIOR TO COMMENCING CONSTRUCTION, OR PRIOR TO OCCUPANCY, AS APPROPRIATE. IF PERMITS ARE DELAYED OR ISSUED WITH CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE OWNER AND ARCHITECT IMMEDIATELY.

E. COORDINATE WORK WITH SITE PLAN, UTILITY PLAN, DEMOLITION PLAN, AND LANDSCAPE PLAN.

F. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING OBSTRUCTIONS, AND CONDITION OF ALL EXISTING INFRASTRUCTURE PRIOR TO CONSTRUCTION. REPORT ALL DISCREPANCIES TO THE ARCHITECT AND VERIFY THE ARCHITECT'S INTENT BEFORE PROCEEDING.

G. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SITE SAFETY.

H. THE CONTRACTOR SHALL MAINTAIN RECORD DRAWINGS ON SITE AT ALL TIMES. THE CONTRACTOR SHALL NOT SCALE DRAWINGS. ONLY WRITTEN DIMENSIONS OR KEYED NOTES SHALL BE USED. UPON REQUEST, AN AUTOCAD *.DWG FILE WILL BE PROVIDED TO A LICENSED SURVEYOR FOR LAYOUT / STAKING PURPOSES.

I. CONTRACTOR SHALL OBTAIN ALL REQUIRED INSPECTIONS OF THE WORK. CONTRACTOR SHALL REGULARLY UPDATE OWNER AND ARCHITECT REGARDING THE STATUS OF THE INSPECTIONS.

J. CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE PROPERTY AND/OR PROJECT LIMITS. ANY DAMAGE TO ADJACENT STRUCTURES RESULTING FROM THE CONSTRUCTION PROCESS SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTING EXISTING CONDITIONS PRIOR TO CONSTRUCTION.

K. CONSTRUCTION EQUIPMENT SHALL ONLY OBSTRUCT DESIGNATED TRAFFIC LANES IF APPROPRIATE BARRICADING PERMITS HAVE BEEN OBTAINED. THE CONTRACTOR SHALL NOT STORE ANY EQUIPMENT OR MATERIAL IN THE RIGHT-OF-WAY.

L. THE CONTRACTOR SHALL PROVIDE A CONSTRUCTION TRAFFIC CONTROL AND SIGNING PLAN THAT CONFORMS TO THE LATEST EDITION OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND LOCAL REQUIREMENTS. THE CONTRACTOR SHALL OBTAIN BARRICADING PERMITS FROM THE APPROPRIATE AUTHORITIES PRIOR TO ANY CONSTRUCTION WORK ON OR ADJACENT TO EXISTING STREETS.

M. THE CONTRACTOR SHALL MAINTAIN ALL BARRICADING AND CONSTRUCTION SIGNING AT ALL TIMES. THE CONTRACTOR SHALL VERIFY THE PROPER LOCATION OF ALL BARRICADING AT THE END AND BEGINNING OF EACH DAY.

N. PAVEMENT GRADES IN MARKED HANDICAPPED PARKING AREAS SHALL NOT EXCEED 2.0% IN ANY DIRECTION. FOR ALL ACCESSIBLE ROUTES, MAXIMUM ALLOWABLE CROSS SLOPE IS 2.0% AND MAXIMUM LONGITUDINAL SLOPE WITHOUT RAMP IS 5.0% FOLLOW ALL ADA ACCESSIBILITY GUIDELINES OR CITY CODES, WHICHEVER IS MORE STRINGENT.

O. ALL TRASH, DEBRIS, & SURFACE VEGETATION SHALL BE CLEARED AND LEGALLY DISPOSED OF OFFSITE.

P. PROPOSED SPOT AND CONTOUR ELEVATIONS SHOWN REPRESENT TOP OF FINISH MATERIAL (I.E. TOP OF CONCRETE, TOP OF CONCRETE BUILDING PAD, TOP OF PAVEMENT MATERIAL, TOP OF LANDSCAPING MATERIAL, ETC.). CONTRACTOR SHALL GRADE, COMPACT SUBGRADE AND DETERMINE EARTHWORK ESTIMATES BASED ON ELEVATIONS SHOWN MINUS FINISH MATERIAL THICKNESSES.

Q. IF FIELD GRADE ADJUSTMENTS ARE REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER.

R. EXISTING UTILITY LINES ARE SHOWN IN AN APPROXIMATE MANNER ONLY AND MAY BE INCOMPLETE OR OBSOLETE. SUCH LINES MAY OR MAY NOT EXIST WHERE SHOWN OR NOT SHOWN. CONTRACTOR SHALL CONTACT NM-811 FOR UTILITY LINE SPOTS TWO WORKING DAYS PRIOR TO CONDUCTING SITE FIELD WORK. CONTRACTOR SHALL FIELD VERIFY AND LOCATE ALL UTILITIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. 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. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF NECESSARY DRY UTILITY ADJUSTMENTS.

S. SOIL TESTING AND INSPECTION SERVICES DURING EARTHWORK OPERATIONS ARE REQUIRED. CONTRACTOR SHALL ALLOW TESTING LABS TO INSPECT AND APPROVE COMPACTED SUBGRADES, BACKFILL, AND FILL LAYERS BEFORE FURTHER CONSTRUCTION WORK IS DONE. SHOULD COMPACTION TESTS INDICATE INADEQUATE DENSITY, CONTRACTOR SHALL PROVIDE ADDITIONAL COMPACTION AND TESTING AT THE CONTRACTOR'S SOLE EXPENSE.

T. CONTRACTOR SHALL PROVIDE ALL OTHER CONSTRUCTION STAKING. CONTRACTOR SHALL LOCATE AND PRESERVE ALL BOUNDARY CORNERS AND REPLACE ANY LOST OR DISTURBED CORNERS AT CONTRACTOR'S SOLE EXPENSE. PROPERTY CORNERS SHALL ONLY BE RESET BY A REGISTERED LAND SURVEYOR.

U. A CURRENT STORMWATER CONTROL PERMIT, INCLUDING AN EROSION SEDIMENT CONTROL PLAN (E.S.C.) FOR EROSION AND SEDIMENT CONTROL IS REQUIRED FOR ALL CONSTRUCTION, DEMOLITION CLEARING, AND GRADING OPERATIONS THAT DISTURB THE SOIL ON ONE ACRE OR MORE OF LAND. OWNER WILL COORDINATE.

V. POST-CONSTRUCTION MAINTENANCE FOR PRIVATE STORMWATER FACILITIES WILL BE THE RESPONSIBILITY OF THE FACILITIES OWNER. PERIODIC INSPECTION AND CERTIFICATIONS OF THE FACILITIES MAY BE REQUIRED BY THE CITY ENGINEER.

W. STORMWATER CONTROL MEASURES ARE REQUIRED TO PROVIDE MANAGEMENT OF 'FIRST FLUSH' (DEFINED AS THE 90TH PERCENTILE STORM EVENT OR 0.34" [0.44" LESS 0.1" FOR INITIAL ABSTRACTION] OF STORMWATER WHICH DISCHARGES DIRECTLY TO A PUBLIC STORM DRAINAGE SYSTEM).

X. ADJUST RIMS OF EXISTING UTILITY FEATURES AS NECESSARY TO MATCH NEW GRADES. UTILITIES IN PAVED AREAS SHALL BE HS-25 TRAFFIC RATED.

Y. ALL NEW PAVEMENT SURFACES SHALL BE CONSTRUCTED WITH POSITIVE SLOPE AWAY FROM BUILDINGS AND POSITIVE SLOPE TOWARD EXISTING AND/OR PROPOSED DRAINAGE PATHS. PAVING AND ROADWAY GRADES SHALL BE ±0.1' FROM PLAN ELEVATIONS. BUILDING PAD ELEVATION SHALL BE ±0.05' FROM PLAN ELEVATION.

Z. ALL EROSION PROTECTION TO BE FRACTURED FACE ROCK (F.F. ROCK) = 6" AVG. DIA. ANGULAR FACED ROCK PLACED OVER GEOTEX 501 NON-WOVEN GEOTEXTILE (O.E.).

AA. SIDESLOPES STEEPER THAN 4:1 BUT LESS THAN 2:1 MUST HAVE PERMANENT EROSION CONTROL (F.F. ROCK O.E.) INSTALLED, TYPICAL. NO SLOPE SHALL BE STEEPER THAN 2:1.

AB. CONTRACTOR SHALL COMPLY WITH LOCAL REGULATIONS FOR RESEEDING OF DISTURBED AREAS.

AC. POND DESIGN PARAMETERS TO BE STRICTLY ADHERED TO FOR CERTIFICATION PURPOSES. SEE DETAIL SHEET FOR ADDITIONAL INFORMATION.

AD. ENGINEER RECOMMENDS THAT OWNER MAINTAIN EROSION PROTECTION ELEMENTS. ENGINEER RECOMMENDS THAT OWNER INSPECT SITE YEARLY AND AFTER EACH RAINFALL TO IDENTIFY NEW AREAS OF EROSION AND INSTALL ADDITIONAL EROSION PROTECTION AS NEEDED BASED ON ACTUAL OCCURRENCES.

AE. MEASURES REQUIRED FOR EROSION AND SEDIMENT CONTROL SHALL BE INCIDENTAL TO THE PROJECT COST.

AF. ALL SITE PREPARATION, GRADING OPERATIONS, FOUNDATION CONSTRUCTION, AND PAVEMENT INSTALLATION WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT, WHICH WILL BE PROVIDED BY THE OWNER OR ARCHITECT. ALL OTHER WORK SHALL, UNLESS OTHERWISE NOTED IN THE PLANS, BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALBUQUERQUE SPECIFICATIONS

ENGINEER'S CERTIFICATION REQUIRED

CONTRACTOR SHALL PROVIDE AN AUTOCAD FORMAT AS-BUILT SURVEY PREPARED BY A LICENSED SURVEYOR WHICH INCLUDES:

- AS-BUILT SPOT ELEVATIONS AT EACH DESIGN SPOT ELEVATION SHOWN ON THE APPROVED PLAN;
- TOP AND BOTTOM ELEVATIONS AS REQUIRED TO DEFINE THE PERIMETER OF PONDS (TO BE USED BY ENGINEER TO CALCULATE AS-BUILT VOLUME PROVIDED);
- POND OVERFLOW ELEVATION

ALL CONSTRUCTION, INCLUDING EROSION PROTECTION (UNLESS NOTED OTHERWISE), STORM DRAIN SYSTEM, COVERED SIDEWALK CULVERTS, RUNDOWNS, CURB OPENINGS, AND RETENTION PONDS SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED PLAN IN ORDER TO RECEIVE ENGINEER'S CERTIFICATION FOR HYDROLOGY APPROVAL AS PART OF THE CERTIFICATE OF OCCUPANCY PROCESS.

EXCEPTION: FRACTURED FACE ROCK DRAINAGE SWALES SHOWN WILL BE CONSTRUCTED AS PART OF THE LANDSCAPING. THEREFORE, THE SWALES WILL NOT BE INCLUDED IN ENGINEER'S CERTIFICATION FOR CERTIFICATE OF OCCUPANCY APPROVAL. OWNER HAS BEEN ADVISED THAT THE SWALES NEED TO BE CONSTRUCTED PER THE DETAILS AND ELEVATIONS PROVIDED ON THE GRADING AND DRAINAGE PLAN AND DETAILS.

POST-CONSTRUCTION MAINTENANCE FOR PRIVATE STORMWATER FACILITIES WILL BE THE RESPONSIBILITY OF THE FACILITIES' OWNER. PERIODIC INSPECTION AND CERTIFICATION OF THE FACILITIES MAY BE REQUIRED BY THE CITY ENGINEER.

DRAINAGE CONCEPT

PER THE APPROVED MASTER DRAINAGE REPORT FOR TRACTS 3-A, 3-B, 4-A AND 4-B, SANTA MONICA PLACE UPDATED FEBRUARY 2012, THIS TRACT (3-B) IS PERMITTED TO DISCHARGE AT THE FOLLOWING RATES CALCULATED USING AHYMO BASED ON NOAA ATLAS 14 RAINFALL DATA:

- 6.8 CFS IS PERMITTED TO DISCHARGE TO DERICKSON AVE. N.E.
- 8.2 CFS IS PERMITTED TO DISCHARGE WEST TO THE INTERIM CHANNEL (FUTURE IMPROVEMENTS WITHIN THE ADJACENT TRACT WILL ACCEPT THESE STORMWATERS INTO A PRIVATE STORM DRAIN SYSTEM.)
- 1.3 CFS IS PERMITTED TO DISCHARGE TO SAN VICENTE AVE. N.E.

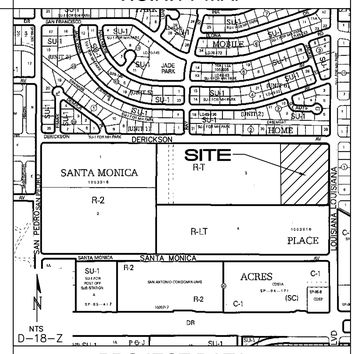
AS NOTED IN THE REPORT: "WHEN TRACT 3-B DEVELOPS, AN OUTFALL STRUCTURE SHALL BE CONSTRUCTED TO CONVEY FLOWS TO THE WEST AT THE FUTURE ROADWAY ALIGNMENT IN TRACT 3-A. AN INTERIM CHANNEL SHALL BE GRADED TO CONVEY FLOWS TO THE POND." SEE SHEET CG-501 FOR INTERIM CHANNEL GRADES.

SEE SUPPLEMENTAL INFORMATION PACKET FOR ADDITIONAL CALCULATIONS AND DRAINAGE BASIN ANALYSIS.

STORMWATER CONTROL MEASURES ARE REQUIRED TO PROVIDE MANAGEMENT OF 'FIRST FLUSH' (DEFINED AS THE 90TH PERCENTILE STORM EVENT OR 0.34" [0.44" LESS 0.1" FOR INITIAL ABSTRACTION] OF STORMWATER WHICH DISCHARGES DIRECTLY TO A PUBLIC STORM DRAINAGE SYSTEM).

THERE ARE 'FIRST FLUSH' RETENTION BASINS THROUGHOUT THE SITE (SEE CG-502). STORM WATER FROM THE IMPERVIOUS AREAS SHALL BE DIRECTED TO THESE BASINS.

VICINITY MAP



PROJECT DATA

PROPERTY: THE SITE IS A PREVIOUSLY DEVELOPED MOBILE HOME PROPERTY LOCATED WITHIN C.O.A. VICINITY MAP D-18. THE SITE IS BOUND TO THE SOUTH BY SAN VICENTE AVE. NE, TO THE WEST BY UNDEVELOPED RESIDENTIAL, TO THE EAST BY LOUISIANA BLVD. AND TO THE NORTH BY DERICKSON AVE.

PROPOSED IMPROVEMENTS: THE PROPOSED IMPROVEMENTS INCLUDE AN APPROXIMATELY 49,688 SF (FOOTPRINT) BUILDING, ASSOCIATED ASPHALT PAVED DRIVES, PARKING, PEDESTRIAN WALKS AND LANDSCAPING.

LEGAL: TRACT 3-B, SANTA MONICA PLACE, ALBUQUERQUE, NM

AREA: 4.55± ACRES

BENCHMARK: VERTICAL DATUM IS BASED UPON THE ALBUQUERQUE CONTROL SURVEY BENCHMARK "18-E18", ELEVATION = 5269.166 (NGVD88)

OFF-SITE: NO OFF-SITE DRAINAGE IMPACTS THIS PROPERTY.

FLOOD HAZARD: THE SUBJECT PROPERTY LIES WITHIN ZONE "X" (AREAS DETERMINED TO BE OUTSIDE 0.2% ANNUAL CHANCE FLOOD PLAIN) IN ACCORDANCE WITH THE NATIONAL FLOOD INSURANCE PROGRAM RATE MAP NO. 35001C0137 F, EFFECTIVE DATE 11-19-03.

SURVEYOR: RUSS P. HUGG, SURV-TEK, INC., (505)897-3366, ALBUQUERQUE, NEW MEXICO.

ENGINEER: FRED C. ARFMAN P.E., ISAACSON & ARFMAN P.A., (505)268-8828, ALBUQUERQUE, NEW MEXICO.

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GRADING AND DRAINAGE NOTES

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CG-100

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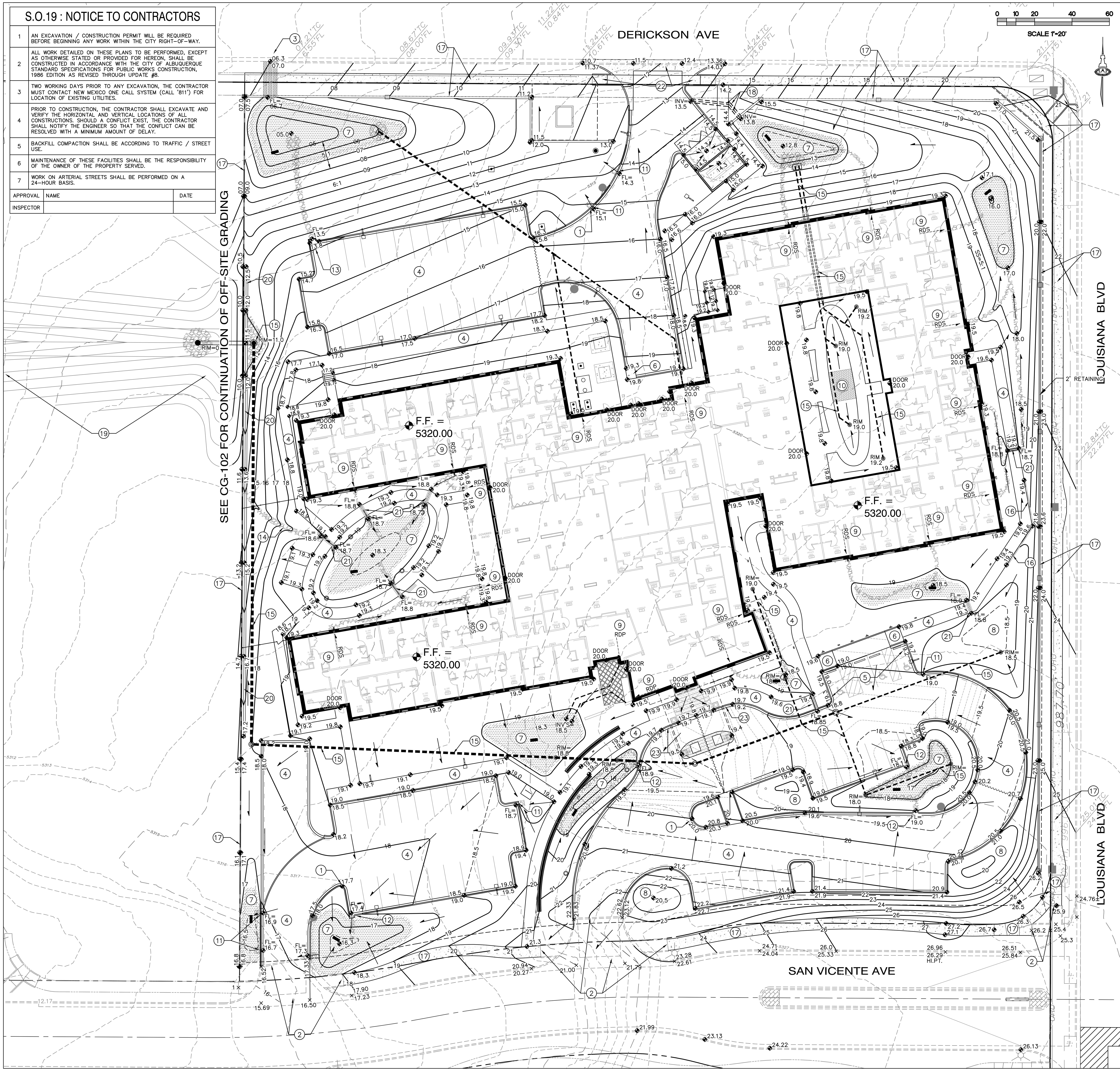

S.O.19 : NOTICE TO CONTRACTORS

1	AN EXCAVATION / CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN THE CITY RIGHT-OF-WAY.
2	ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION AS REVISED THROUGH UPDATE #8.
3	TWO WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM (CALL '811') FOR LOCATION OF EXISTING UTILITIES.
4	PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL CONSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
5	BACKFILL COMPACTION SHALL BE ACCORDING TO TRAFFIC / STREET USE.
6	MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
7	WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.

APPROVAL	NAME	DATE
INSPECTOR		

KEYED NOTES

1. SPOT ELEVATION LABELS WITHIN GUTTER AREA REPRESENT FLOWLINE UNLESS NOTED. ADD 0.5' TYPICAL FOR TOP OF CURB / TOP OF ADJACENT WALK ELEVATIONS.
2. PROVIDE SMOOTH TRANSITIONS TO EXISTING ACCESS DRIVE, ADA RAMPS & VALLEY GUTTER.
3. CONSTRUCT THREE 24" WIDE COVERED SIDEWALK CULVERTS PER C.O.A. STD. DWG. 2236. S.O.19 PERMIT REQUIRED FOR STORM DRAIN IMPROVEMENTS WITHIN PUBLIC R.O.W. SEE S.O.19 REQUIREMENTS THIS SHEET. SEE CG-502 FOR ADDITIONAL INFORMATION.
4. CONSTRUCT ONSITE PAVING, CURB & GUTTER, AND WALKS AT ELEVATIONS SHOWN. SEE PAVING PLAN, PAVING DETAILS AND SITE DETAILS FOR ADDITIONAL INFORMATION. NOTE THAT PAVEMENT SLOPES AND CROSS-SLOPES VARY THROUGHOUT TO ACHIEVE GRADES NECESSARY TO ACHIEVE ADA COMPLIANCE, FIRST FLUSH REQUIREMENTS, PIPE COVERAGE, ETC. SEE LEGEND FOR 1', 0.5' AND 0.1' CONTOUR LINETYPES PROVIDED TO CLARIFY DRAINAGE CONCEPT.
5. SLOPES WITHIN HANDICAP PARKING AREAS TO MEET ADA REQUIREMENTS. MAX. SLOPE = 2% IN ANY DIRECTION.
6. CONSTRUCT HANDICAP ACCESS RAMP TO ADA STANDARDS. SEE SHEET CP-501 FOR DETAILS.
7. GRADE FIRST FLUSH RETENTION BASIN (F.F.BASIN). SEE SHEET CG-502 FOR FINISH GRADE TOP ELEVATION, BOTTOM ELEVATION AND VOLUME REQUIRED (SEE CG-100: GENERAL NOTE 'P'). CONSTRUCT A PERCOLATION PIT WITHIN EACH F.F.BASIN. SEE CG-502 FOR DETAIL. NOTE: GRADING OF F.F.BASINS WILL BE INSPECTED AS PART OF ENGINEER'S CERTIFICATION FOR CERT. OF OCCUPANCY. DURING LANDSCAPING, F.F.BASINS WILL BE SMOOTHLY INTEGRATED INTO LANDSCAPING WHILE MAINTAINING REQUIRED TOP AND BOTTOM ELEVATION, VOLUME AND INLET / OVERFLOW ELEVATIONS.
8. LANDSCAPING TO BE DEPRESSED 6"± TO CAPTURE STORMWATER WHICH FALLS ON IT. SEE LANDSCAPE PLAN. NOTE: DO NOT DEPRESS LANDSCAPING WITHIN 10' OF ANY STRUCTURE. TYPICAL
9. BUILDING ROOF DISCHARGE LOCATION TO SURFACE GRADE. CONSTRUCT F.F. ROCK SWALE INTEGRATED WITH LANDSCAPING TO RETENTION POND BOTTOM. SEE DETAIL SHEET CG-502. SEE SHEETS A1.41 AND A4.01 FOR ADDITIONAL ROOF DRAIN INFORMATION.
10. GRADES WITHIN INTERIOR COURTYARD ARE PROVIDED FOR GENERAL INFORMATION TO INDICATE POSITIVE DRAINAGE AWAY FROM BUILDING TO PROPOSED STORM DRAIN INLETS. COORDINATE WITH LANDSCAPE ARCHITECT. INSTALL FOUR STORM DRAIN INLETS AT RIM ELEVATIONS SHOWN. GRADE COURTYARD TO DRAIN TO INLETS @ MIN. 1% SLOPE.
11. PROVIDE 1' WIDE CURB OPENING TO PASS FLOW. SEE DETAIL SHEET CG-502. PROVIDE 3' X 3' X 12" DEEP F.F. ROCK EROSION PROTECTION AT OUTFALL (DO NOT BLOCK FLOWLINE).
12. CONSTRUCT 2' WIDE (BOTTOM WIDTH) CONCRETE RUNDOWN. CONSTRUCT F.F. ROCK SWALE INTEGRATED WITH LANDSCAPING TO RETENTION POND BOTTOM. SEE DETAIL SHEET CG-502.
13. CONSTRUCT 3' WIDE (BOTTOM WIDTH) CONCRETE RUNDOWN. CONSTRUCT F.F. ROCK SWALE INTEGRATED WITH LANDSCAPING TO RETENTION POND BOTTOM. SEE DETAIL SHEET CG-502.
14. CONSTRUCT F.F. ROCK SWALE INTEGRATED WITH LANDSCAPING FROM POND OVERFLOW ELEVATION TO CONCRETE ALLEY GUTTER. SEE DETAIL SHEET CG-502.
15. CONSTRUCT PRIVATE STORM DRAIN SYSTEM. SEE SHEET CG-501 FOR SIZES / SLOPES / INLET INFORMATION / MATERIALS.
16. CONSTRUCT LANDSCAPE WALLS (2' MAX. RETAINING WALL) TO ACHIEVE GRADE DIFFERENCE THIS AREA. SEE LANDSCAPE PLAN FOR DESIGN.
17. SEE SHEETS CP-501 AND CP-502 FOR PERIMETER WALL (WEST AND EAST SIDE TO RETAIN 2' MAX. AS SHOWN) AND PUBLIC SIDEWALK CONSTRUCTION.
18. INSTALL THREE 4" DIAMETER PIPES FROM POND THROUGH PERIMETER WALL TO DISCHARGE TO PAVEMENT THROUGH FACE OF CURB AT INVERT ELEVATIONS SHOWN. PROVIDE FITTINGS AS REQUIRED.
19. CONSTRUCT OFF-SITE DRAINAGE IMPROVEMENTS AND TEMPORARY GRADING WITHIN ADJACENT PROPERTY (SAME OWNER – PERMITTED BY PLAT). SEE CG-102.
20. CONSTRUCT 250 LF(±) CONCRETE ALLEY GUTTER PER C.O.A. STD. DWG. 2415A ADJACENT TO RETAINING WALL AT FLOWLINE ELEVATIONS SHOWN TO CONTROL GRADE.
21. CONSTRUCT 1' WIDE COVERED SIDEWALK CULVERT PER C.O.A. STD. DWG. 2236 AT FLOWLINE ELEVATIONS SHOWN.
22. CONSTRUCT NEW PRIVATE ENTRANCE PER C.O.A. STD. DWG. 2426. SEE CP-101 AND CP-501 FOR ADDITIONAL INFORMATION.
23. TRANSITION CURB FROM FLUSH TO 6" OVER 10'.
24. CONSTRUCT CONCRETE STEPS WITH FREE-STANDING HANDRAIL EA. SIDE. SEE CP-501 FOR DETAIL.
25. CONSTRUCT ADA COMPLIANT HANDICAP ACCESS RAMP WITH FREE-STANDING HANDRAIL EA. SIDE. SEE CONCRETE STEP DETAIL ON SHEET CP-501 FOR HANDRAIL REQUIREMENTS.

KEYED NOTES

Symbol	Description
79	PROPOSED CONTOUR – 1' INCREMENT
75.5	PROPOSED CONTOUR – 0.5' INCREMENT
75.1	PROPOSED CONTOUR – 0.1' INCREMENT
78.3	PROPOSED SPOT ELEVATION
	FLOW ARROW
RDS	ROOF DISCHARGE TO SURFACE
F.F.=XXXX.XX	FINISH FLOOR ELEVATION
78.3±	EXISTING ELEVATION (±) TO MATCH. PROVIDE SMOOTH TRANSITION.
	ROCK EROSION CONTROL
	PROPOSED STORM DRAIN (SEE CG5.1)
FL=	FLOWLINE ELEVATION
INV=	INVERT ELEVATION
	RETAINING WALL
	'FIRST FLUSH' RETENTION BASIN

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10.16.15

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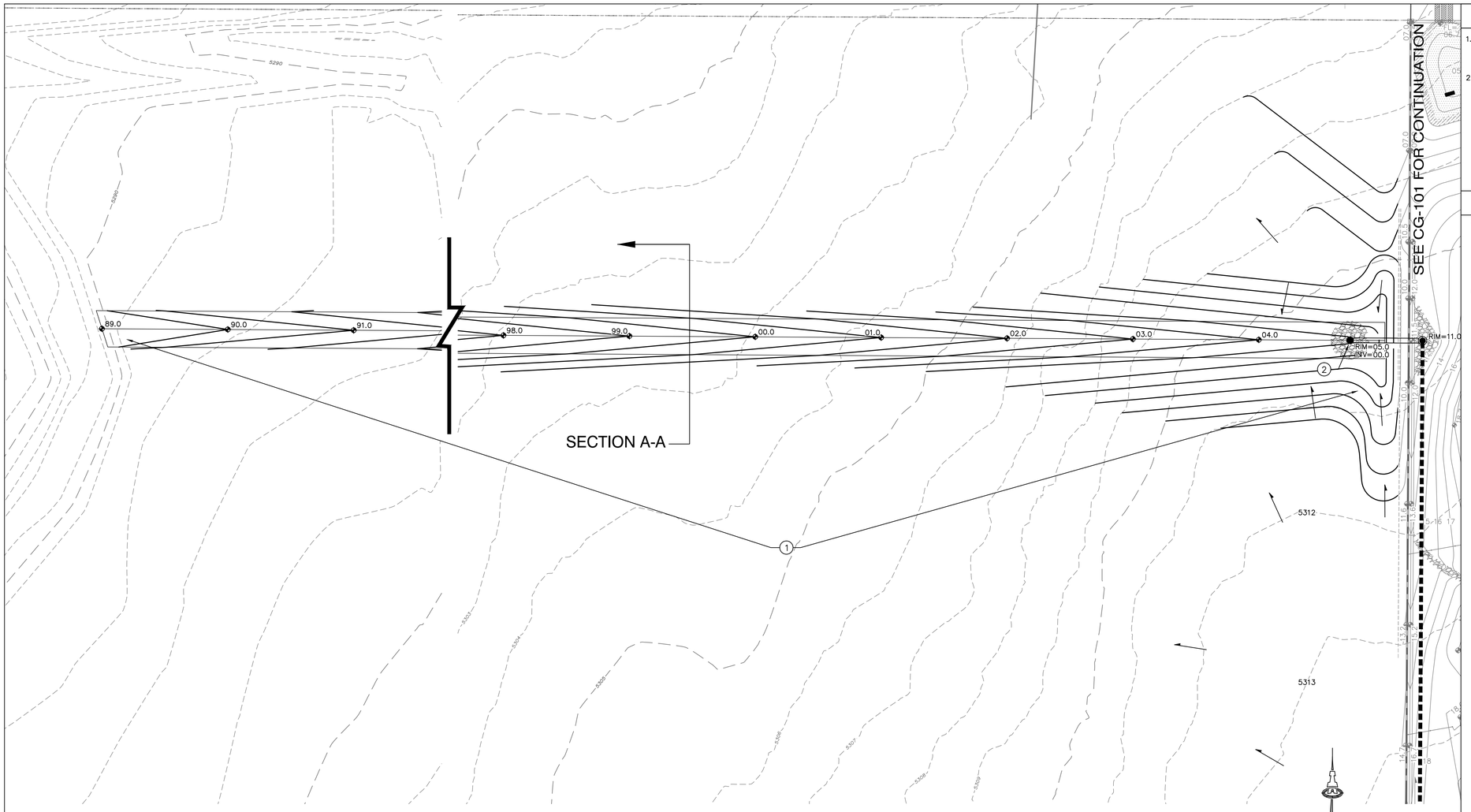

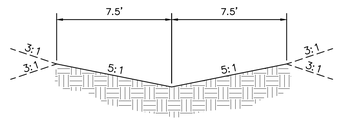

SECTION A-A

KEYED NOTES

1. CONSTRUCT 840 LF X 15' WIDE COMPACTED EARTH SWALE. SLOPE = 2.0%±. SIDESLOPES = 5:1 AS SHOWN. DAYLIGHT TO EXISTING GRADES @ 3:1 MAX. SIDE SLOPE. SEE SECTION A-A THIS SHEET.
2. CONSTRUCT TEMPORARY BUBBLE-UP OUTLET AT END OF STORM DRAIN. INSTALL 15' DIAMETER FRACTURED FACE ROCK EROSION PROTECTION AROUND OUTLET. SEE CG-502 FOR DESIGN PLAN AND PROFILE.

LEGEND

- 79 — PROPOSED CONTOUR – 1' INCREMENT
- 78.3 — PROPOSED SPOT ELEVATION
- FLOW ARROW
- ROCK EROSION CONTROL
- PROPOSED STORM DRAIN (SEE CG5.1)

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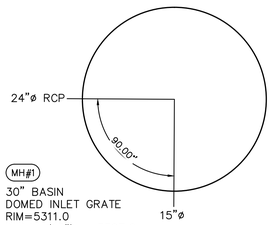
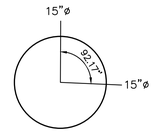
NYLOPLAST BASIN DESIGNS



MH#1
30" BASIN
DOMED INLET GRATE
RIM=5311.0
INV IN (15") = 5307.6
INV OUT (24" RCP) =5300.6



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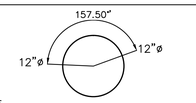
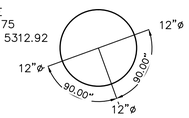
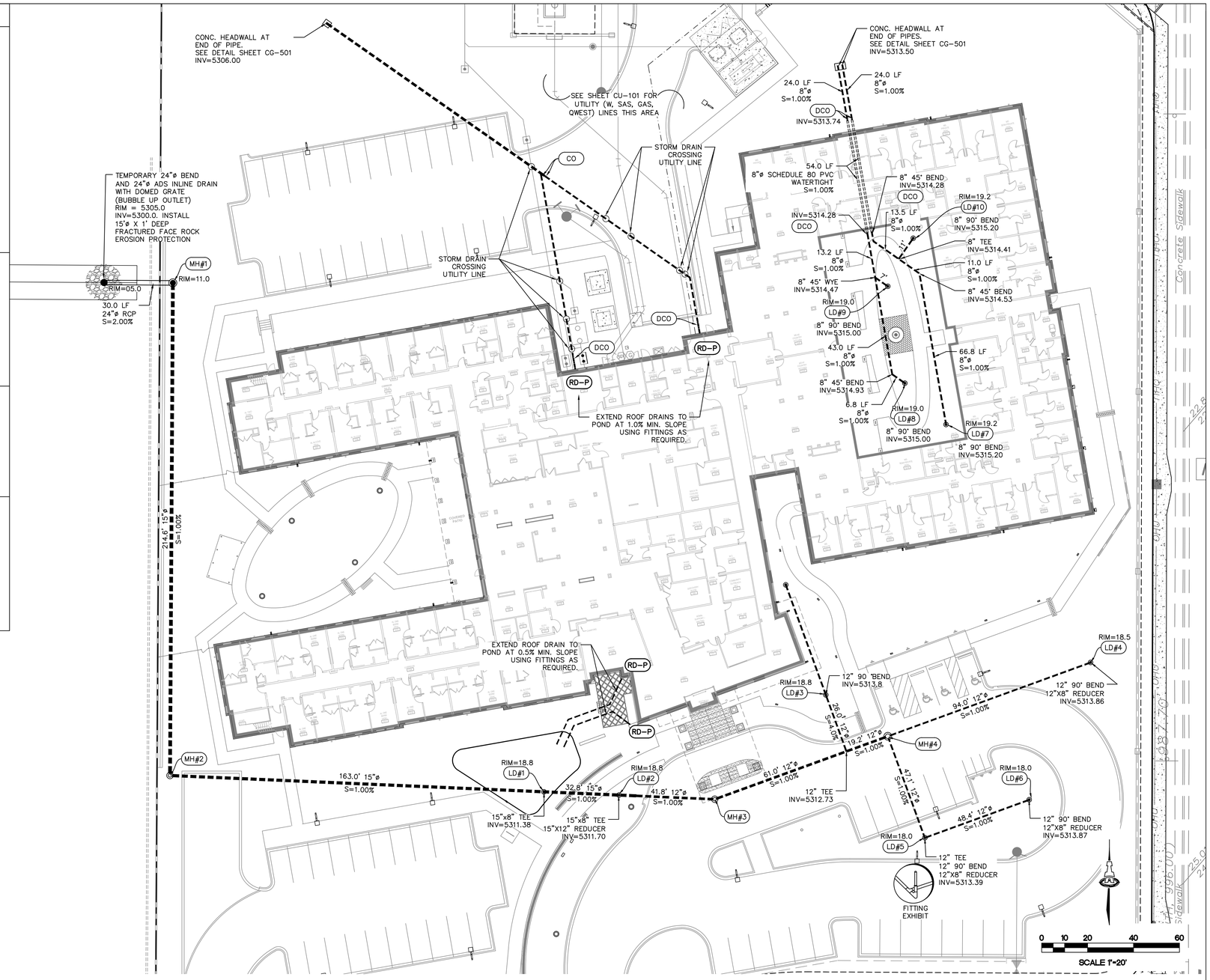
18" BASIN
SOLID GRATE
RIM = 5317.0
INV = 5309.75



MH#3
12" BASIN
SOLID GRATE
RIM = 5319.5
INV = 5312.12

MH#4
15" BASIN
SOLID GRATE
RIM = 5318.75
INV (12") = 5312.92





STORM DRAIN GENERAL NOTES

A. ALL PRIVATE STORM DRAIN LINES AND FITTINGS SHALL BE THE FOLLOWING MATERIAL:

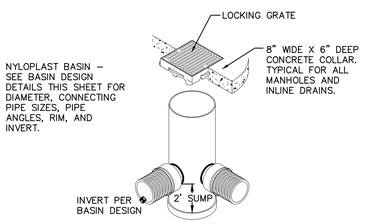
< 12" DIA. SHALL BE EITHER ADS N-12 WT PIPE OR SDR 35.
= 12" DIA. SHALL BE ADS MEGA GREEN WT PIPE OR SDR 35.
> 12" DIA. SHALL BE ADS MEGA GREEN WT PIPE.

SCHEDULE 80 PVC WHERE NOTED

B. INSTALL ALL STORM DRAIN INLETS AND PIPE PER MANUFACTURER'S SPECIFICATIONS.

C. STORM DRAIN SYSTEM WILL REQUIRE REGULAR MAINTENANCE TO ENSURE PROPER FUNCTIONING DURING STORM EVENTS. ENGINEER RECOMMENDS THAT OWNER PUT IN PLACE INSPECTION AND MAINTENANCE REQUIREMENTS SCHEDULED TO OCCUR MONTHLY AND AFTER EACH STORM EVENT.

ADS NYLOPLAST BASIN MANHOLES GENERAL DESIGN INFORMATION



SCALE: N.T.S.

STORM DRAIN STRUCTURES

CO / DCO ALL CLEANOUTS (CO) AND DOUBLE CLEANOUTS (DCO):
- 8"ø ADS INLINE DRAIN WITH 6" OUT.
- 8"X6" TEE
- LOCKING SOLID GRATE
- 8" WIDE X 6" DEEP CONCRETE COLLAR

RD-P ROOF DRAIN DISCHARGE TO BELOW GRADE. EXTEND PER NOTES USING FITTINGS AS REQUIRED.

LD# STORM DRAIN INLET IN NON-PAVED AREAS SHALL BE CONSTRUCTED WITH:
- 8"ø ADS INLINE DRAIN WITH 8" OUT
- LOCKING DOMED GRATE
- 8" WIDE X 6" DEEP CONCRETE COLLAR

MH# MANHOLES SHALL BE CONSTRUCTED WITH:
- ADS NYLOPLAST BASIN (*)
- 2' SUMP
- LOCKING GRATE (*)
- 8" WIDE X 6" DEEP CONCRETE COLLAR

(*SEE INDIVIDUAL BASIN DESIGNS THIS SHEET)

SCALE: N.T.S.

I&A DRAWING INFORMATION: 2047 CG-501.dwg Oct 21,2015

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FRED C. ARFMAN NEW MEXICO 7322 LICENSED PROFESSIONAL ENGINEER
10.16.15

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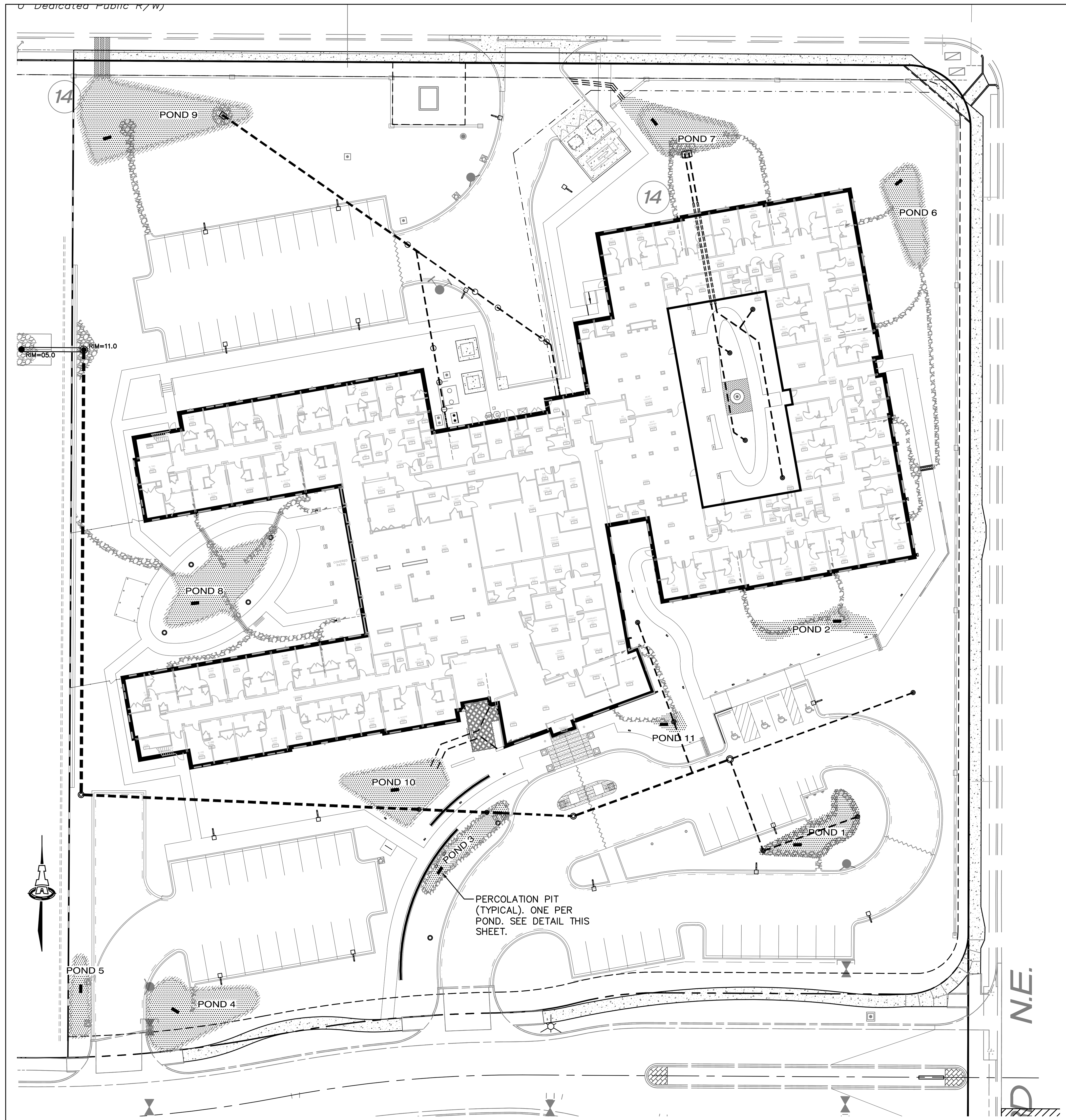


FOR EACH POND
POND OVERFLOW
POND BOTTOM
POND VOLUME

POND #1		
Contour	Area	Volume
5318.00	586	
5317.00	25	306 CF
TOTAL VOL.		**306** CF

POND #2		
Contour	Area	Volume
5318.90	544	
5318.50	35	116 CF
TOTAL VOL.		**116** CF

POND #3		
Contour	Area	Volume
5318.80	450	
5318.00	110	224 CF
TOTAL VOL.		**224** CF

POND #4		
Contour	Area	Volume
5317.30	1180	
5316.30	83	632 CF
TOTAL VOL.		**632** CF

POND #5		
Contour	Area	Volume
5316.70	330	
5316.50	106	44 CF
TOTAL VOL.		**44** CF

POND #6		
Contour	Area	Volume
5317.00	695	
5316.00	8	352 CF
TOTAL VOL.		**352** CF

POND #7		
Contour	Area	Volume
5313.80	945	
5312.80	280	613 CF
TOTAL VOL.		**613** CF

POND #8		
Contour	Area	Volume
5318.70	1175	
5318.30	266	288 CF
TOTAL VOL.		**288** CF

POND #9		
Contour	Area	Volume
5306.70	1527	
5305.20	225	1314 CF
TOTAL VOL.		**1314** CF

POND #10		
Contour	Area	Volume
5318.80	948	
5318.30	370	330 CF
TOTAL VOL.		**330** CF

POND #11		
Contour	Area	Volume
5318.80	115	
5318.50	10	19 CF
TOTAL VOL.		**19** CF

TOTAL ACREAGE		4.55	ACRES
PERCENT 'D' (IMPERVIOUS)		56%	
REQUIRED STORAGE		0.34	" PER SF
TOTAL VOLUME REQUIRED		3147 CF	
TOTAL VOLUME PROVIDED		4235 CF	

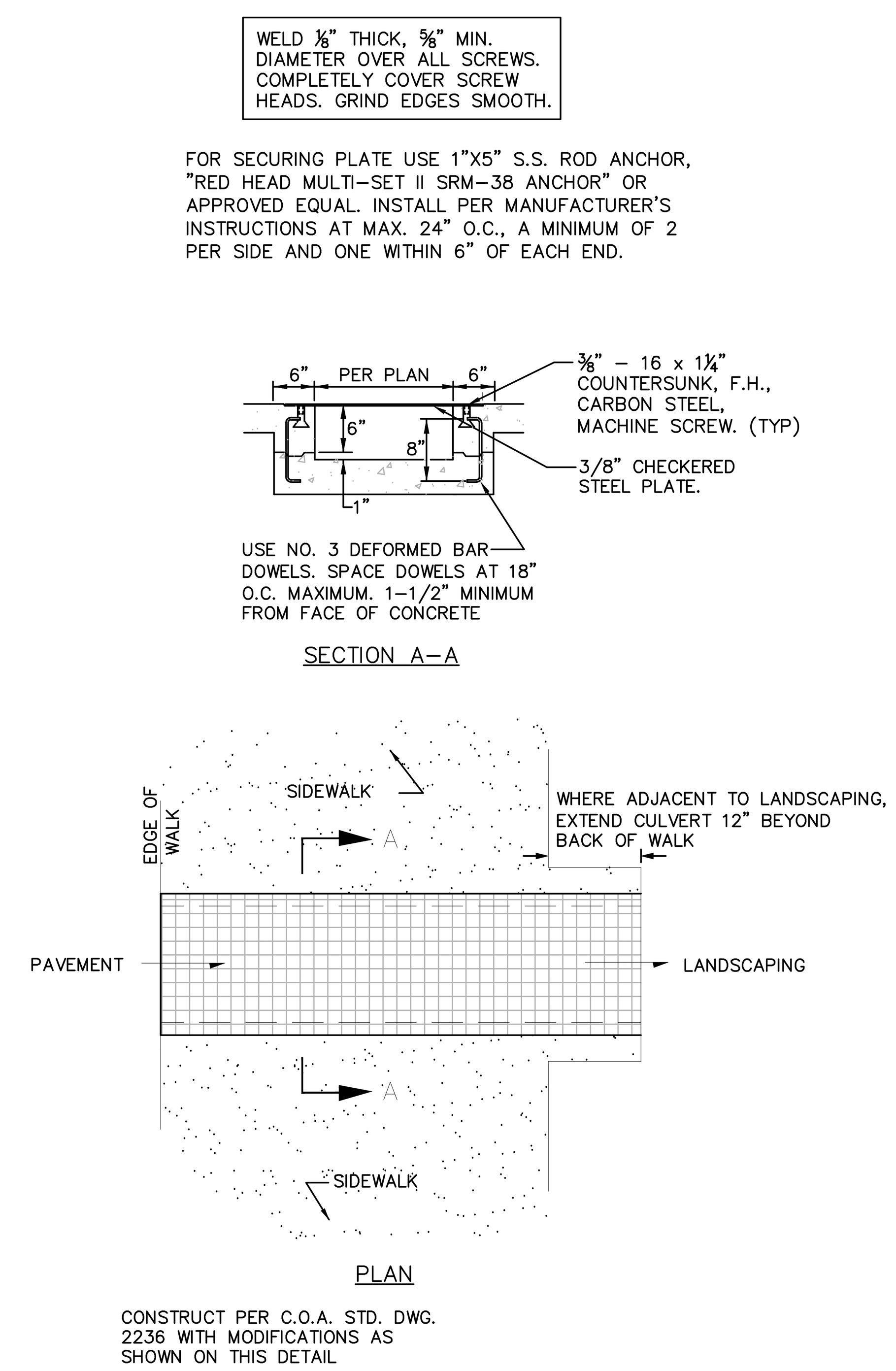
ALL PRIVATE STORM DRAIN INLETS, PIPES AND PONDS SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED PLAN IN ORDER TO RECEIVE ENGINEER'S CERTIFICATION (VOLUME, ELEVATIONS, RIMS AND INVERTS).

SEE SHEET CG-100 FOR ADDITIONAL INFORMATION

POST-CONSTRUCTION MAINTENANCE FOR PRIVATE STORMWATER FACILITIES WILL BE THE RESPONSIBILITY OF THE FACILITIES' OWNER. PERIODIC INSPECTION AND CERTIFICATION OF THE FACILITIES MAY BE REQUIRED BY THE CITY ENGINEER.

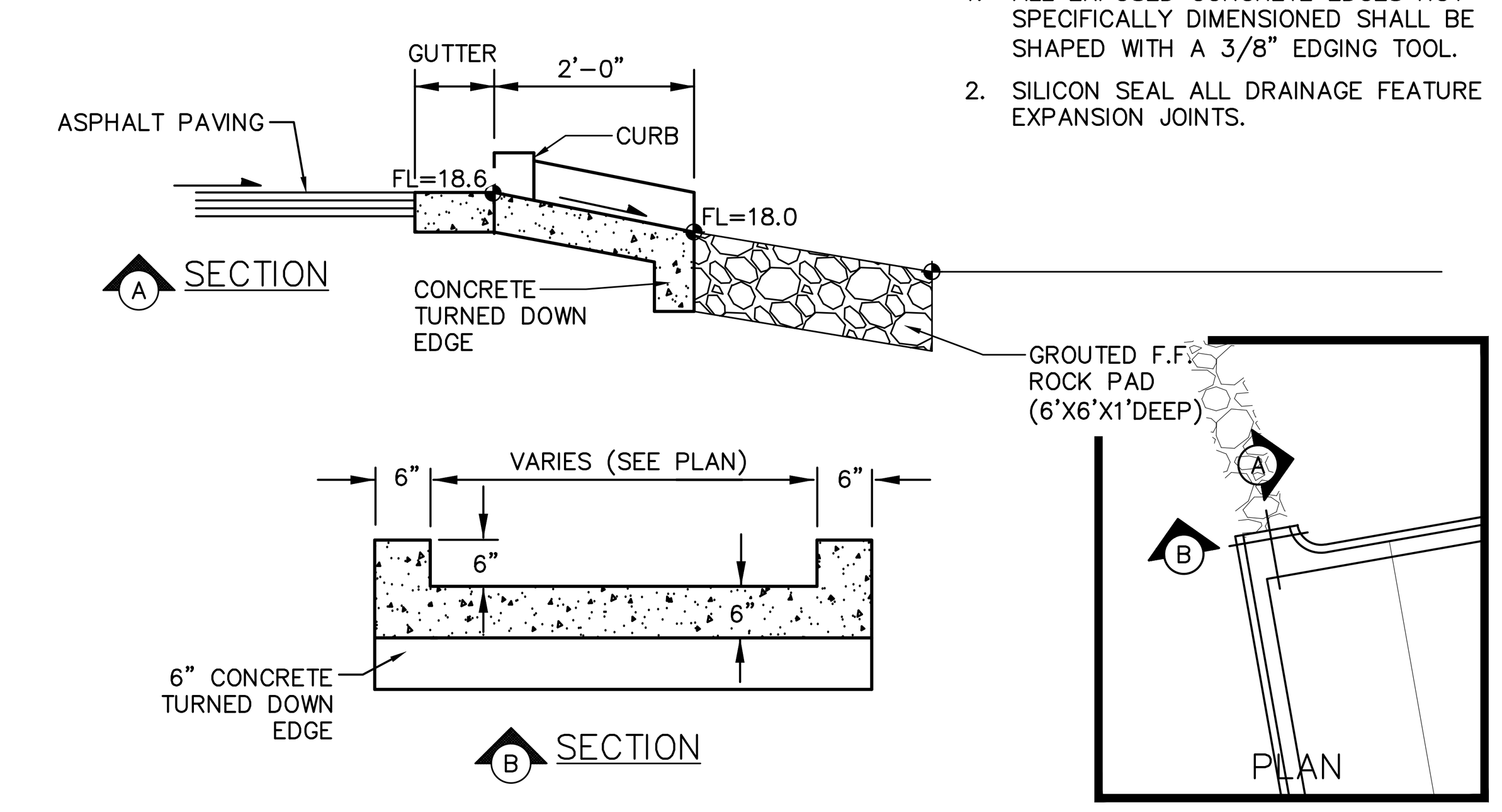
PERCOLATION PIT

SCALE: N.T.S. 1"=30'



COVERED SIDEWALK CULVERT

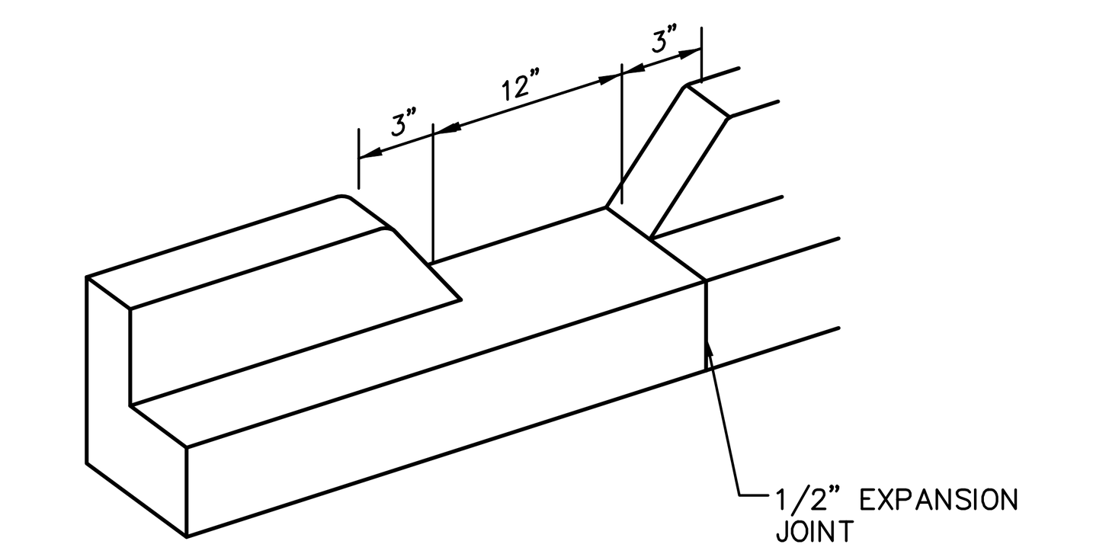
SCALE: N.T.S. SCALE: N.T.S.



1. ALL EXPOSED CONCRETE EDGES NOT SPECIFICALLY DIMENSIONED SHALL BE SHAPED WITH A 3/8" EDGING TOOL.
2. SILICON SEAL ALL DRAINAGE FEATURE EXPANSION JOINTS.

CONCRETE RUNDOWN

SCALE: N.T.S. SCALE: N.T.S.

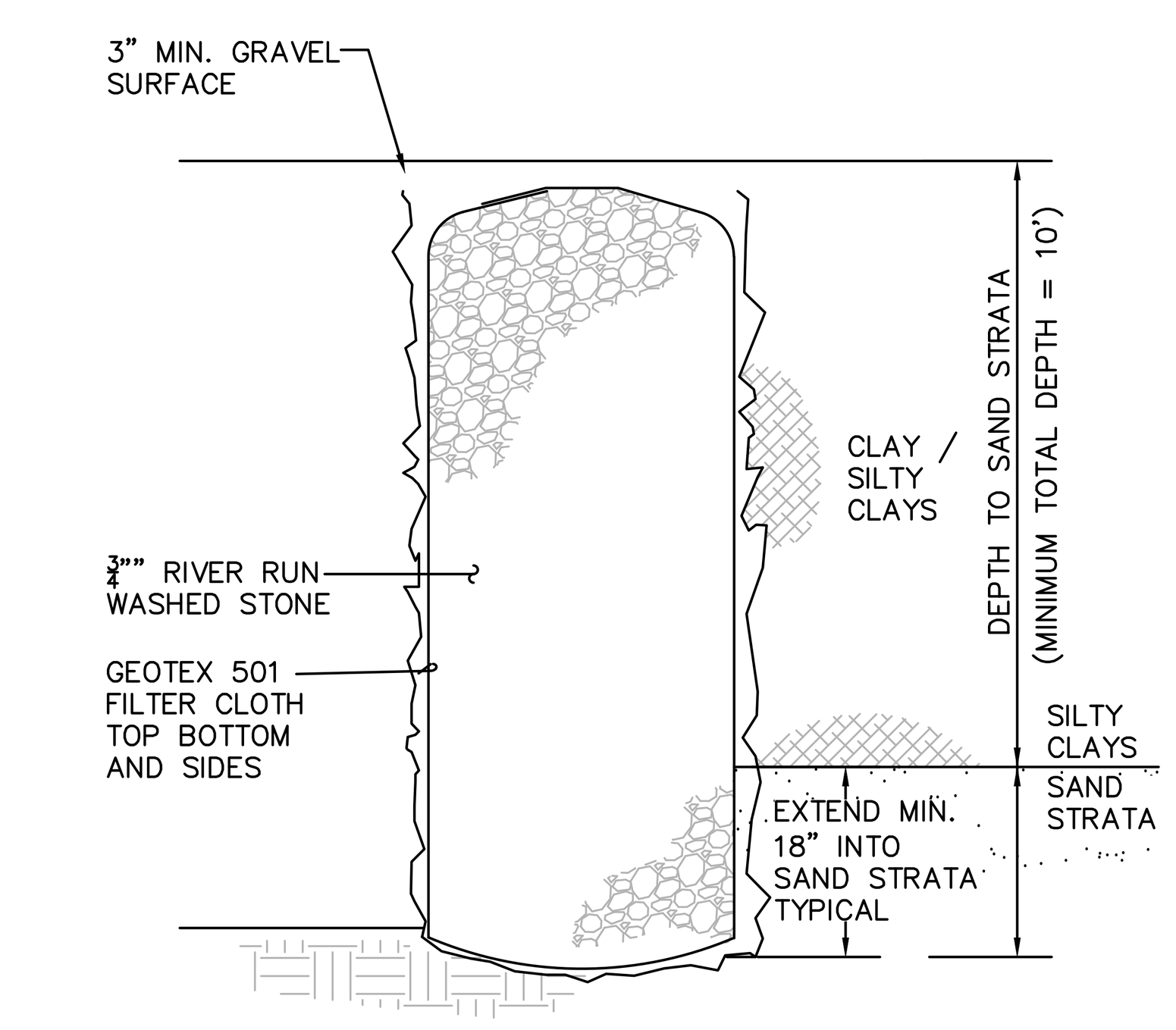


GENERAL NOTES

1. EDGES NOT SPECIFICALLY DIMENSIONED SHALL BE SHAPED WITH A 3/8" EDGING TOOL.

CURB OPENING

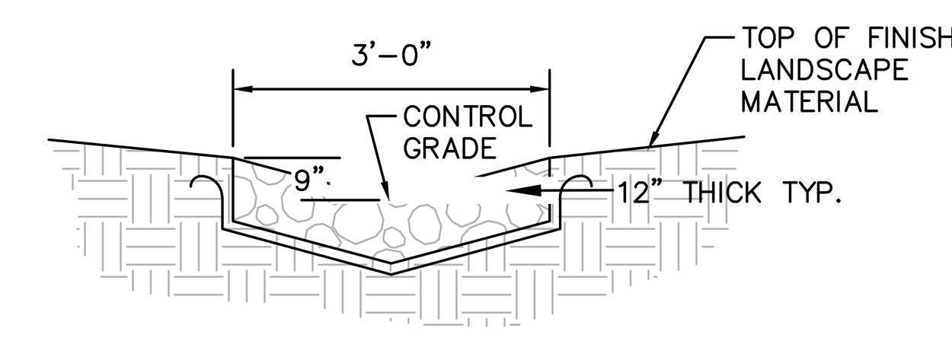
SCALE: N.T.S. SCALE: N.T.S.



PERCOLATION PIT

18" WIDE X 48" LONG X DEPTH SHOWN (TYPICAL) SCALE: N.T.S.

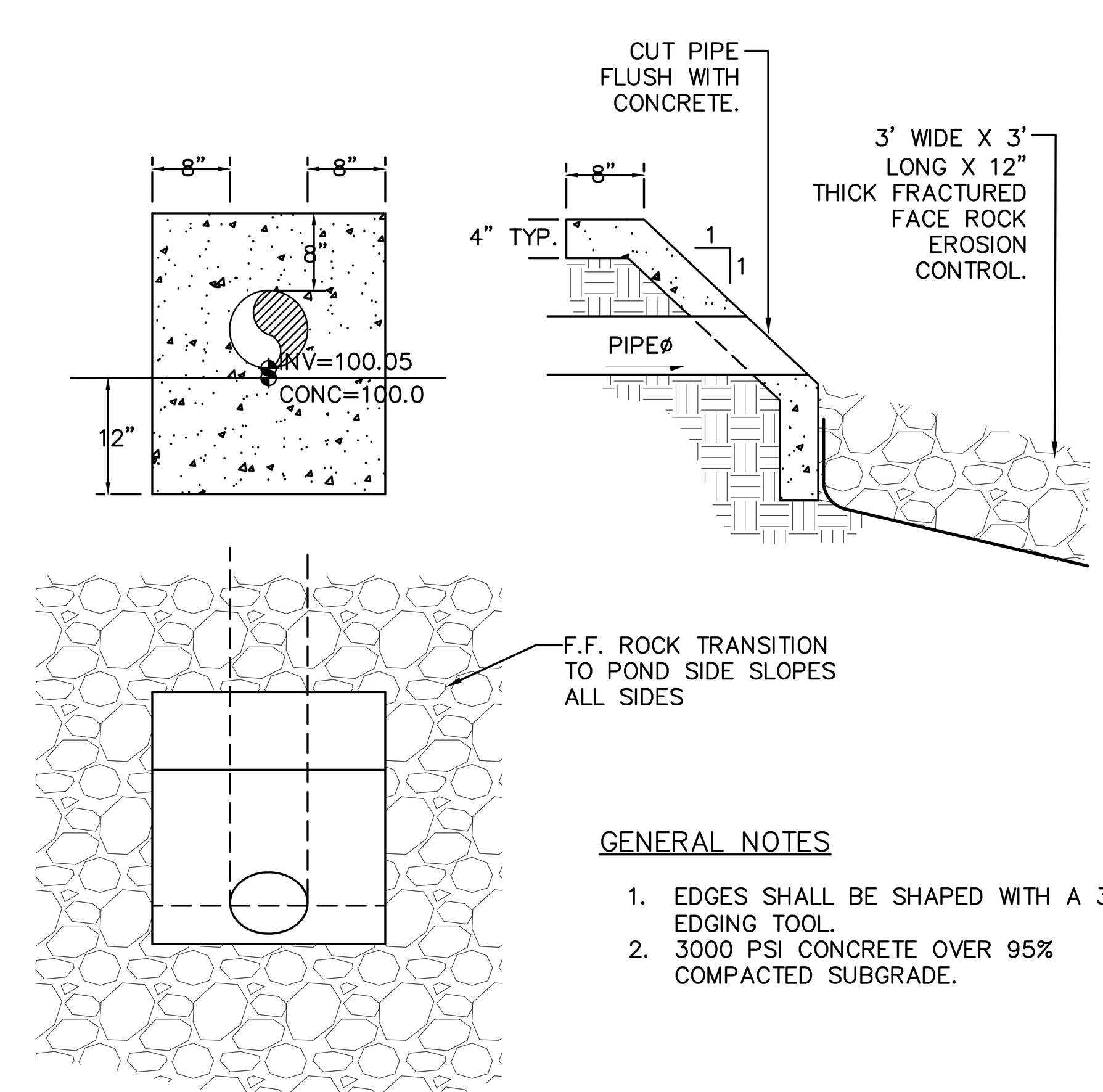
CONSTRUCT ALL SWALES AND FRACTURED FACE ROCK EROSION PROTECTION BELOW ADJACENT GRADE TO ENSURE RUNOFF CAN BE CAPTURED AND CONVEYED PROPERLY



- VARY FRACTURED FACE ROCK SIZE BETWEEN 4" AND 8" DIA. (AVG.=6").
- PLACE GEOTEX 501 NON-WOVEN GEOTEXTILE (O.E.) BENEATH ALL EROSION PROTECTION.

FRACTURED FACE ROCK SWALE AND EROSION PROTECTION

SCALE: N.T.S.

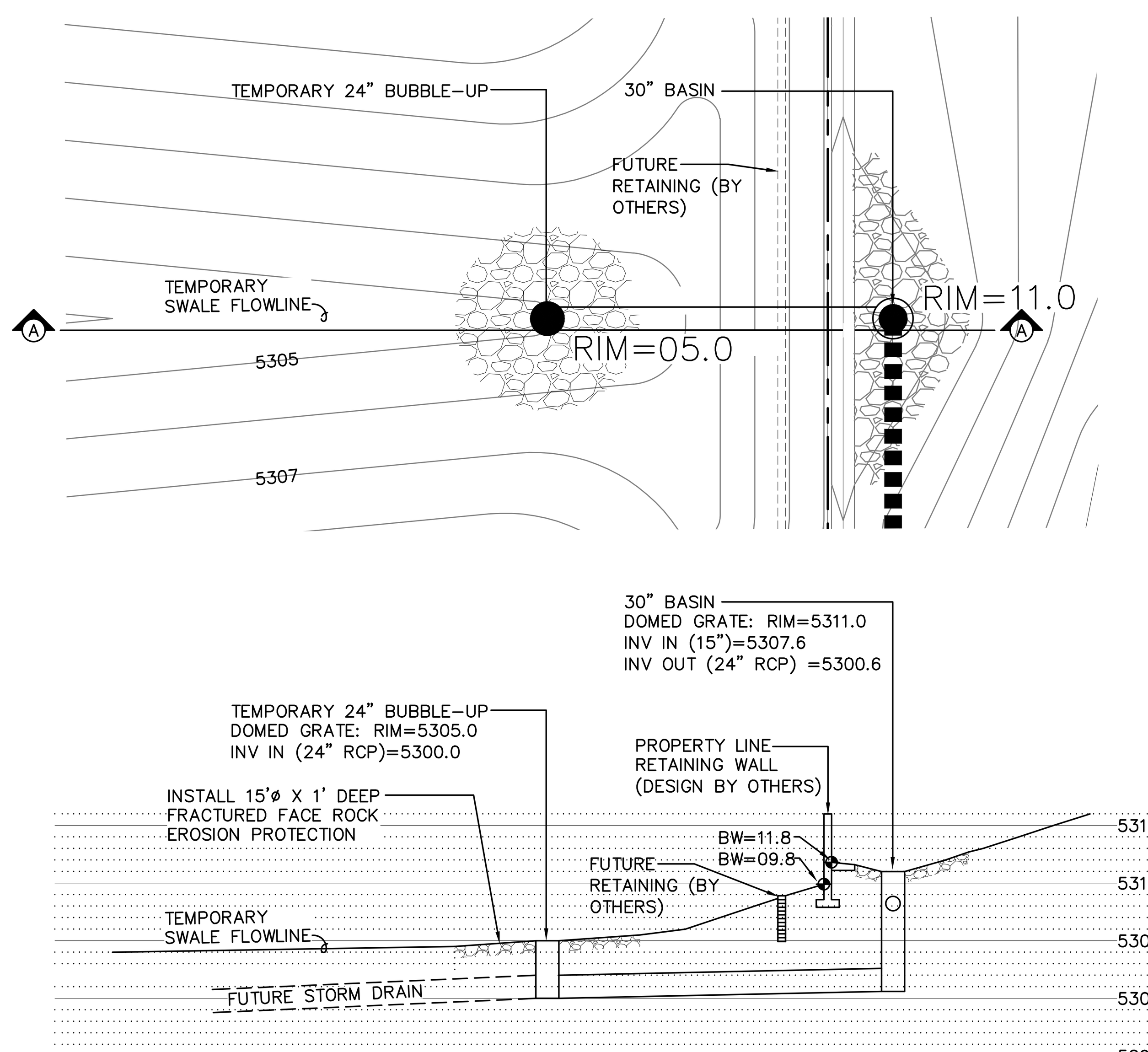


GENERAL NOTES

1. EDGES SHALL BE SHAPED WITH A 3/8" EDGING TOOL.
2. 3000 PSI CONCRETE OVER 95% COMPACTED SUBGRADE.

CONCRETE HEADWALL @ ROOF DRAIN OUTLET

SCALE: N.T.S.



SECTION A-A: WEST 24" STORM DRAIN TO TEMPORARY BUBBLE UP

SCALE: N.T.S.

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