

EXISTING SITE DRAINAGE

THE 0.98 ACRE SITE IS LOCATED IN DOWNTOWN ALBUQUERQUE ON THE NORTH SIDE OF SILVER AVENUE BETWEEN 2ND STREET AND 3RD STREET. THE SITE IS BOUNDED ON THE NORTH BY AN EXISTING ALLEY WITH BUILDINGS AND A PARKING LOT TO THE NORTH OF THE ALLEY.

THE SITE IS CURRENTLY VACANT AND DRAINS FROM THE NORTHEAST TO THE SOUTHWEST. THE SITE CURRENTLY GENERATES A 100-YR, 6-HR PEAK FLOW OF 2.23 CFS RESULTING IN 0.064 AC-FT OF RUNOFF VOLUME AS SHOWN IN THE TABLE BELOW. THE STORM WATER SHEET FLOWS OVER THE SIDEWALK AND INTO THE STREET GUTTER WHERE IT IS COLLECTED IN AN EXISTING DROP INLET. THERE ARE NO OFF-SITE FLOWS THAT ENTER THIS SITE NOR IS THIS SITE LOCATED IN A FLOOD PLAIN AS SHOWN ON FIRM MAP #35001C0334G.

On-Site Basins

Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		100-Year			10-Year		
			Treatment A %	Treatment A (acres)	Treatment B %	Treatment B (acres)	Treatment C %	Treatment C (acres)	Treatment D %	Treatment D (acres)	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs
Ex. Basin 1	42,575	0.98	0%	0	100%	0.98	0%	0.00	0%	0.00	0.780	0.064	2.23	0.280	0.023	0.93
Basin 1	28,354	0.65	0%	0	5%	0.03	0%	0.00	95%	0.62	2.053	0.111	2.98	1.287	0.070	1.97
Basin 2	11,301	0.26	0%	0	0%	0.00	0%	0.00	100%	0.26	2.120	0.046	1.22	1.340	0.029	0.81
Basin 3	1,728	0.04	0%	0	0%	0.00	0%	0.00	100%	0.04	2.120	0.007	0.19	1.340	0.004	0.12
Basin 4	1,192	0.03	0%	0	0%	0.00	10%	0.00	100%	0.03	2.233	0.005	0.14	1.392	0.003	0.09
											0.169	4.62				

Equations:

Weighted E = Ea * Aa + Eb * Ab + Ec * Ac + Ed * Ad / (Total Area)

Volume = Weighted D * Total Area

Flow = Qa * Aa + Qb * Ab + Qc * Ac + Qd * Ad

Less Precipitation, E (inch)

Zone 2 100-Year 10-Year

Ea 0.53 0.13

Eb 0.78 0.28

Ec 1.13 0.52

Ed 2.12 1.34

Peak Discharge (cfs/acre)

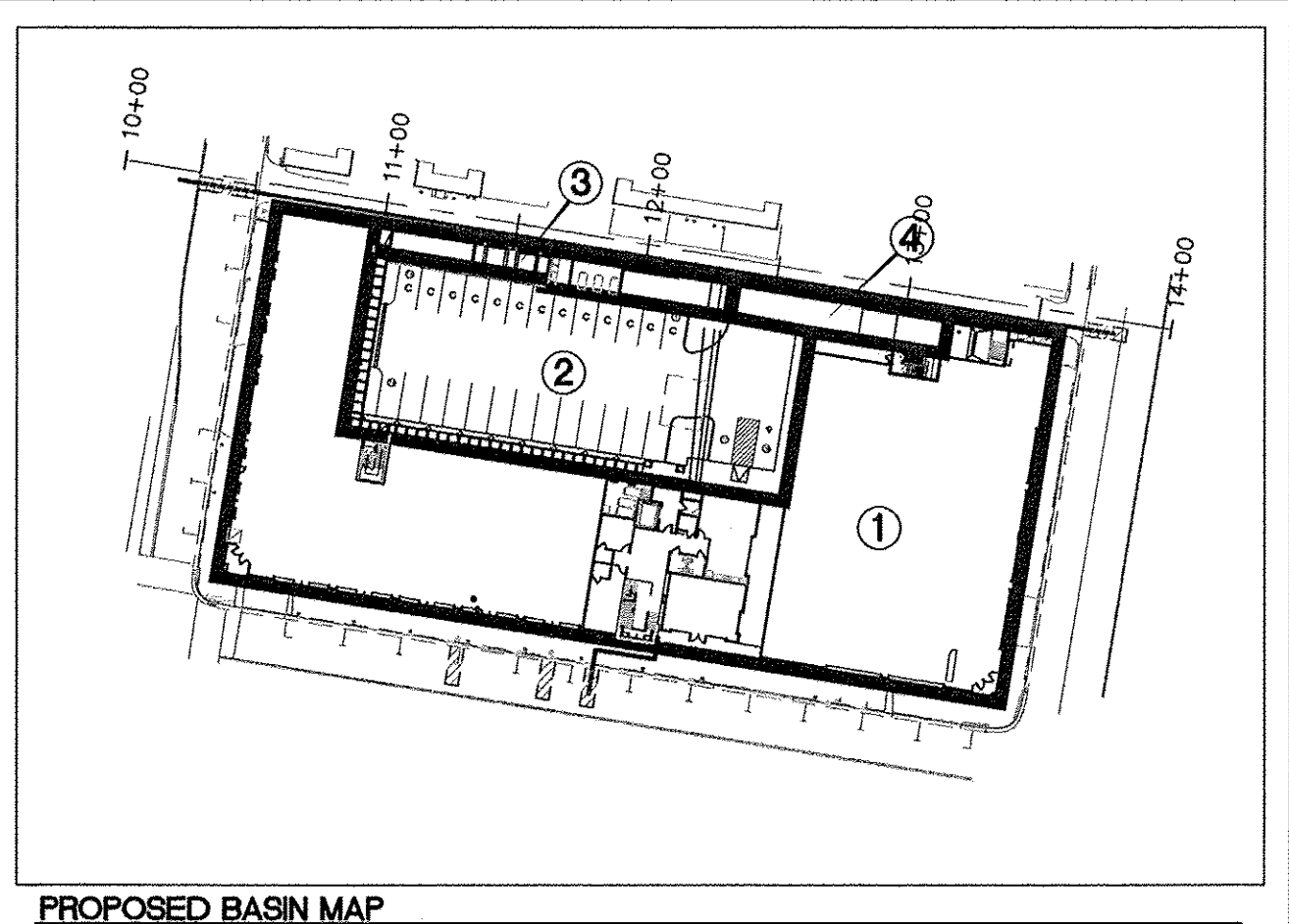
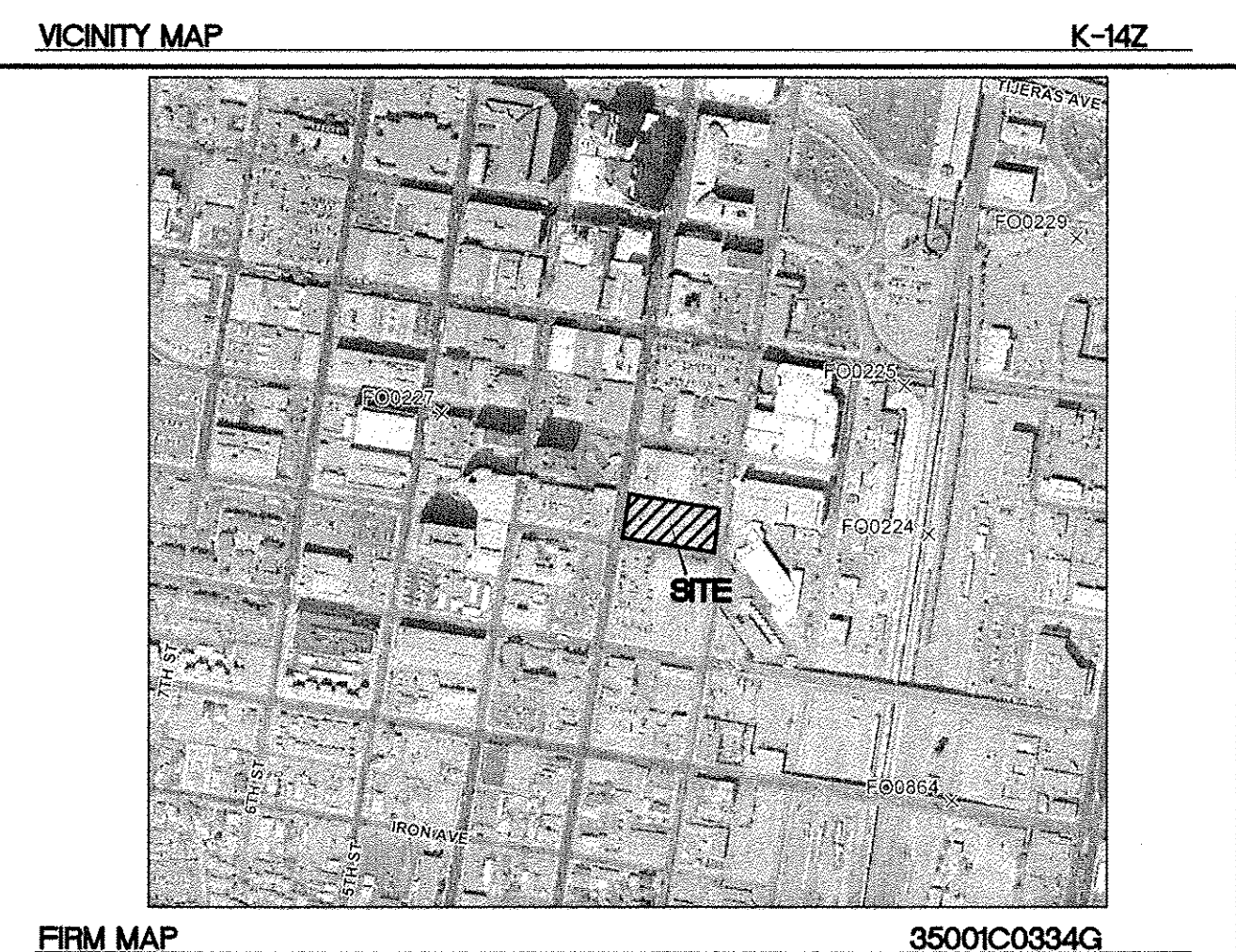
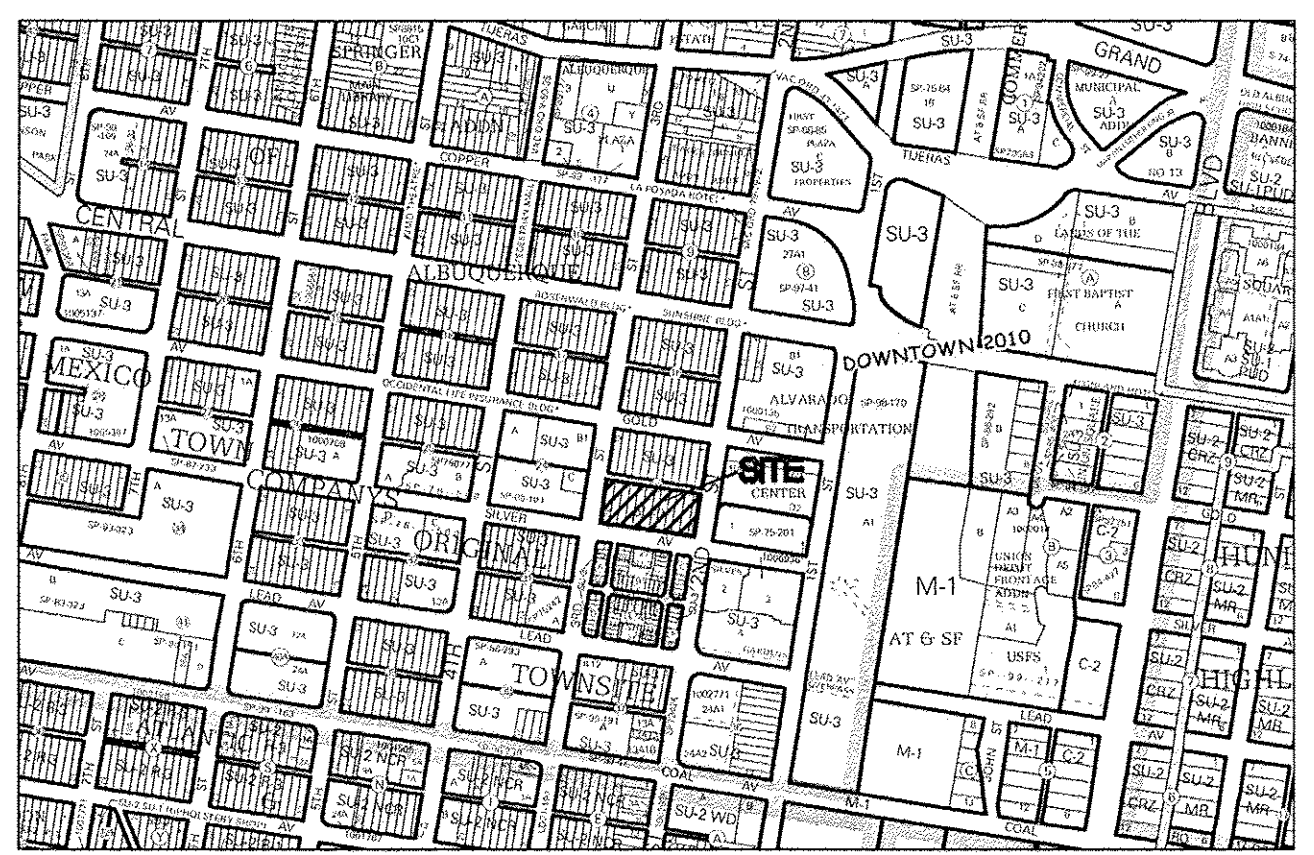
Zone 2 100-Year 10-Year

Qa 1.56 0.38

Qb 2.28 0.95

Qc 3.14 1.71

Qd 4.70 3.14

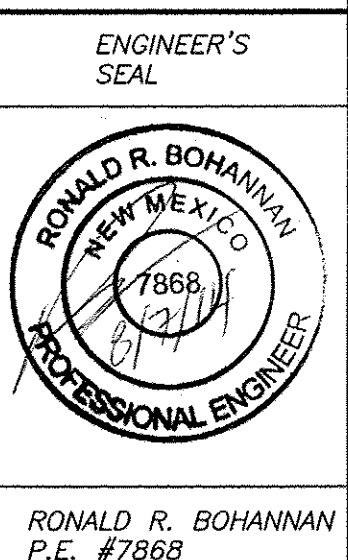


LEGEND

—	CURB & GUTTER	—	EXISTING POWER POLE
---	BOUNDARY LINE	—	EXISTING GAS VALVE
---	EASEMENT	—	EXISTING OVERHEAD UTILITIES
---	SIDEWALK	—	EXISTING GAS
---	EXISTING CURB & GUTTER	---	EXISTING SANITARY SEWER LINE
---	SINGLE CLEAN OUT	---	EXISTING WATER LINE
---	DOUBLE CLEAN OUT	---	EXISTING STORM SEWER LINE
---	EXISTING SD MANHOLE	---	EXISTING INDEX CONTOUR
---	EXISTING GAS MANHOLE	---	EXISTING CONTOUR
---	EXISTING FIRE HYDRANT		
---	EXISTING WATER METER		

CAUTION:

ALL EXISTING UTILITIES SHOWN WERE OBTAINED FROM RESEARCH, AS-BUILTS, SURVEYS OR INFORMATION PROVIDED BY OTHERS. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO AND INCLUDING ANY EXCAVATION, TO DETERMINE THE ACTUAL LOCATION OF UTILITIES AND OTHER IMPROVEMENTS, PRIOR TO STARTING THE WORK. ANY CHANGES FROM THIS PLAN SHALL BE COORDINATED WITH AND APPROVED BY THE ENGINEER.



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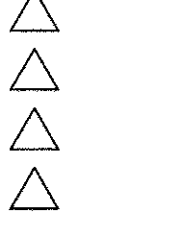
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ENGINEER

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REVISIONS



DRAWN BY

REVIEWED BY

DATE

PROJECT NO.

DRAWING NAME

**GRADING PLAN
PLAN**

SHEET NO.

CG-102

OF

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SHALLOW DRY WELL W/
DIVERSION PUMP
(SUPPLIED BY AMAFACA)

INTAKE PIPE FROM EXISTING
60" RCP STORM SEWER
(13.2' DBG)

OVERFLOW PIPE TO
EXISTING STORM SEWER
(SIZE TBD)

8000 GAL PRIMARY
SETTLING TANK,
6' DIA. X 40' L

PRIMARY DOSING TANK W/
SIMPLEX PUMP SYSTEM
6' DIA. X 8'H
(SEE DETAIL 3.1, SHEET C3)

4" PVC OVERFLOW
PIPE TO EXISTING
STORM SEWER

(2) 3' X 40' TREATMENT PLANTER
BOXES W/ UNDERDRAIN, 2'
MEDIA DEPTH

3500 GAL SAND/OIL INTERCEPTOR
W/ SUMP TRANSFER PUMP
(SEE DETAIL 2.2, SHEET C3)

1" SCH 40 PVC
TRANSFER PIPE

FORCE MAIN/MANIFOLD,
SCH 40 PVC,
VARIABLE PIPE SIZES
(SEE TABLE 3, SHEET C3)

6" DIA. PVC UNDERDRAIN,
PERFORATIONS WITHIN
PLANTER BOX EXTENTS ONLY.

TO EXISTING 60" RCP
STORM SEWER

(3) 3' X 40' TREATMENT PLANTER BOXES
W/ UNDERDRAIN, 2' MEDIA DEPTH
(SEE DETAIL 1.1, SHEET C2)

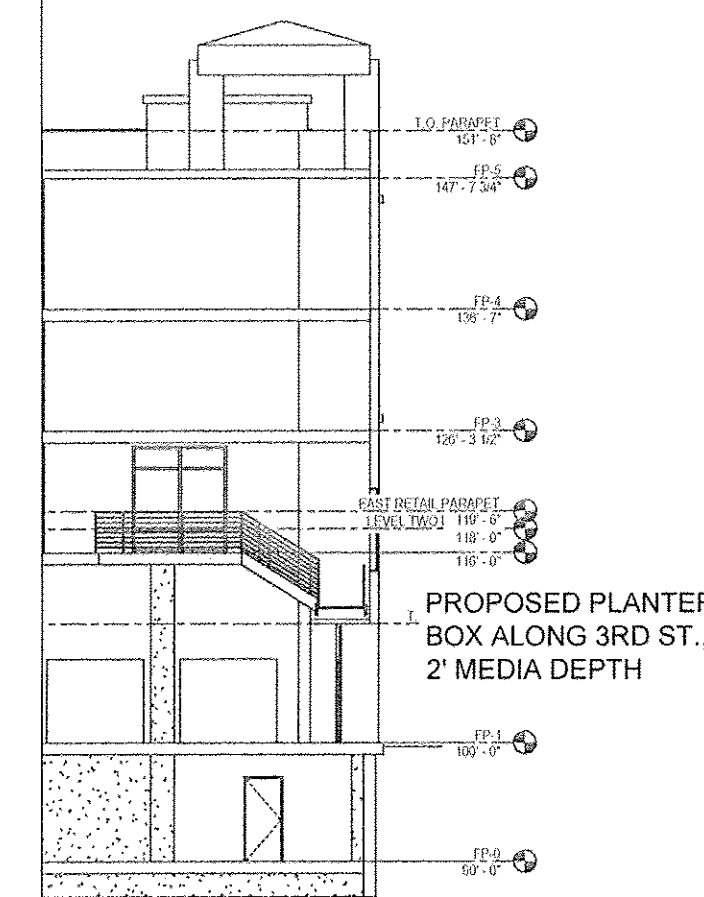
GROCERY
STORE
10903 SF

(6) 3' X 40' TREATMENT PLANTER
BOXES W/ UNDERDRAIN, 3'
MEDIA DEPTH

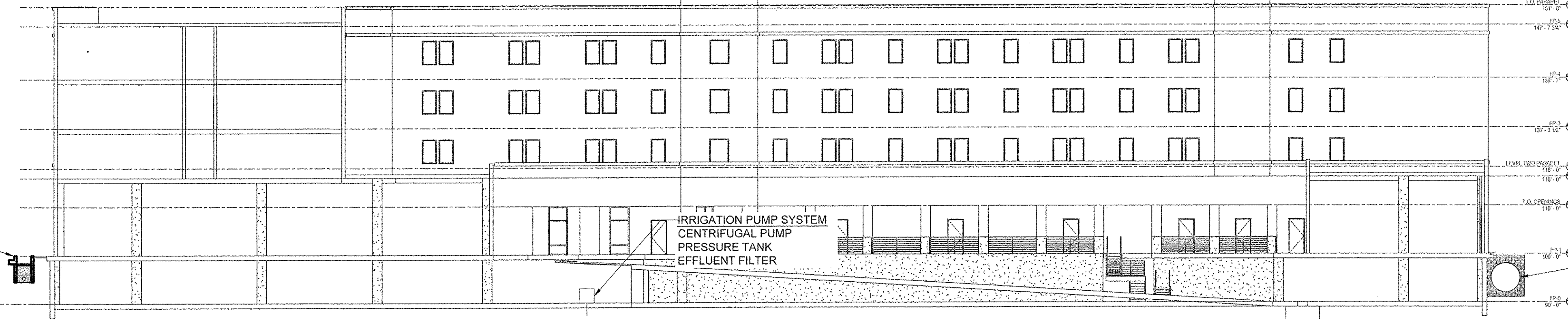
SEE DETAIL 1.3, SHEET C2

SITE PLAN

NOT TO SCALE



PROPOSED PLANTER
BOX ALONG 3RD ST.,
2' MEDIA DEPTH



IRRIGATION PUMP SYSTEM
CENTRIFUGAL PUMP
PRESSURE TANK
EFFLUENT FILTER

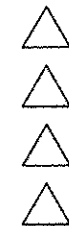
34000 GAL CISTERN,
12' DIA, 4' SOIL COVER
BOTTOM ELEV. 73'-0"

3200 GAL SAND/OIL
SEPARATOR WITH SUMP
PUMP SYSTEM
BOTTOM ELEV. 81'-0"
(SEE DETAIL 2.2, SHEET C3)

8000 GAL PRIMARY
SETTLING TANK
BOTTOM ELEV. 92'-0"
(SEE DETAIL 2.1, SHEET C3)

SECTION VIEW

REVISIONS



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PROJECT NO. 14-0064

DRAWING NAME

GRADING PLAN
PLAN

SHEET NO.

CG-103

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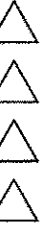
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DRAWING NAME

GRADING PLAN
PLAN

SHEET NO.

CG-104

OF

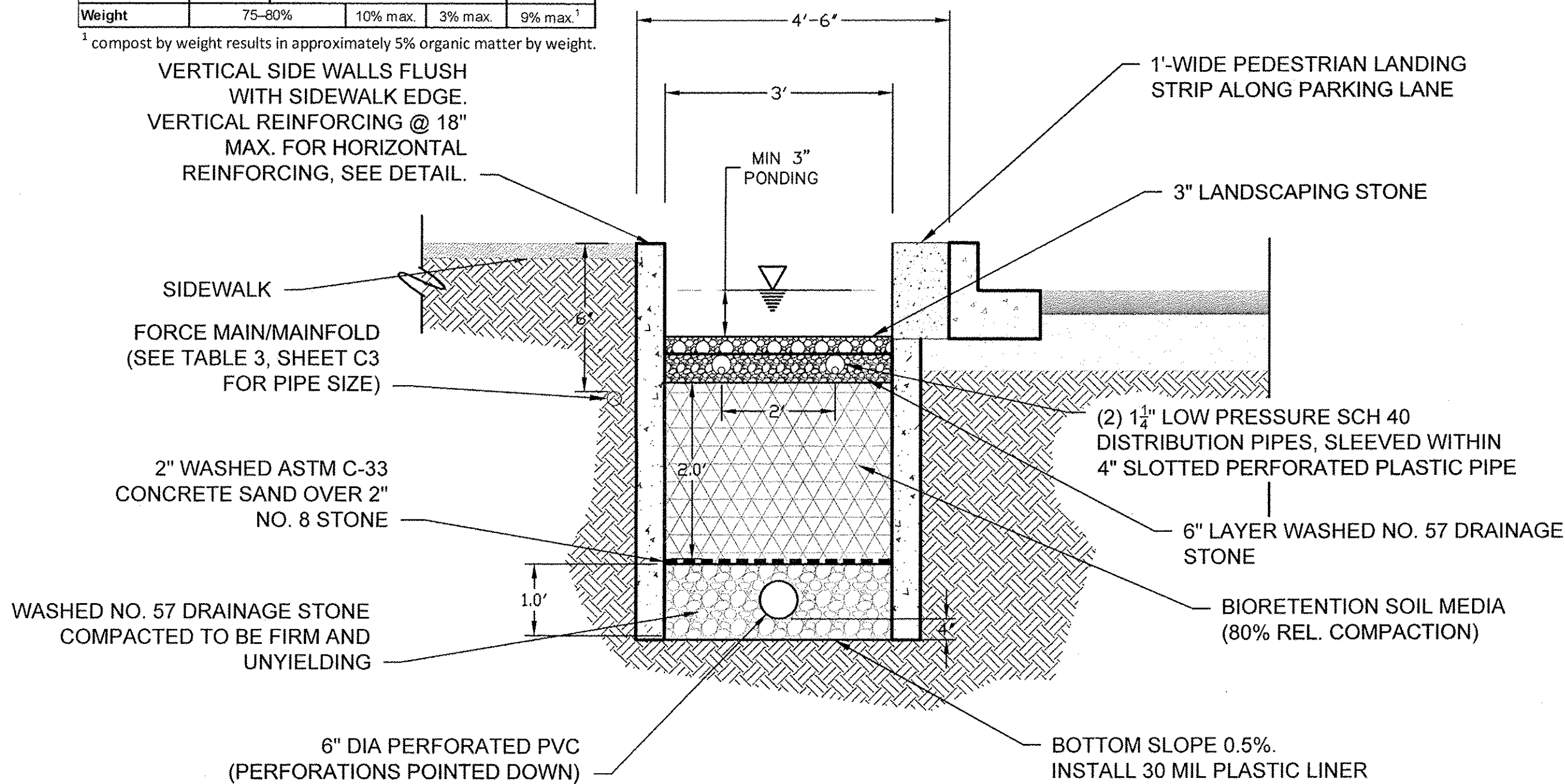
NOT TO SCALE

BIORETENTION MEDIA SPECIFICATION

BSM Composition	Sand	Sandy Loam			Compost
		Sand	Silt	Clay	
Volume	65%	20%	20%	15%	15%
Weight	75-80%	10% max.	3% max.	9% max. ¹	

¹ compost by weight results in approximately 5% organic matter by weight.

VERTICAL SIDE WALLS FLUSH
WITH SIDEWALK EDGE.
VERTICAL REINFORCING @ 18"
MAX. FOR HORIZONTAL
REINFORCING, SEE DETAIL.



DETAIL 1.1 - (SECTION A-A) PLANTER BOX SECTION

NOT TO SCALE

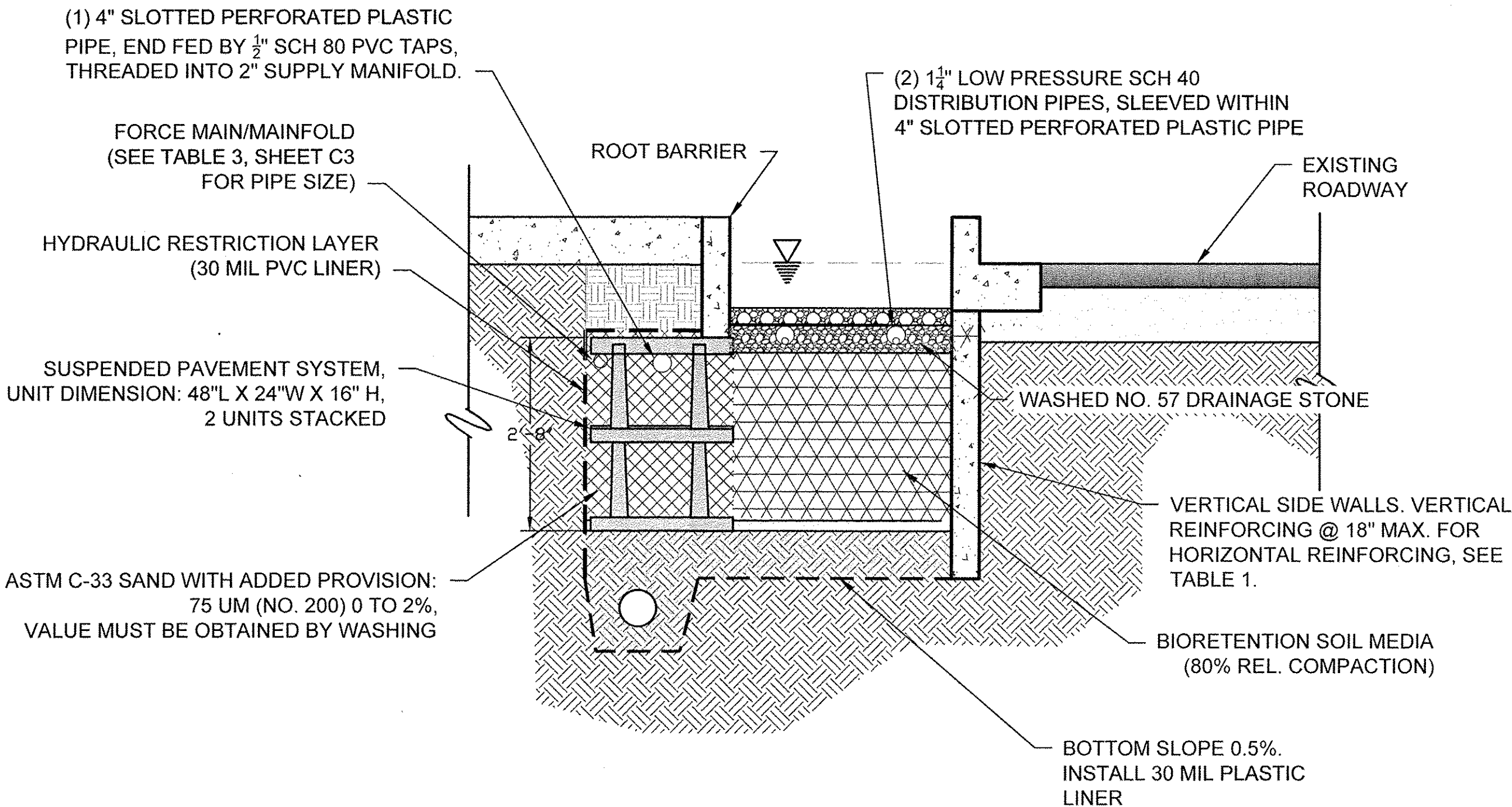
(1) 4" SLOTTED PERFORATED PLASTIC
PIPE, END FED BY 1/2" SCH 80 PVC TAPS,
THREADED INTO 2" SUPPLY MANIFOLD.

FORCE MAIN/MAINFOLD
(SEE TABLE 3, SHEET C3
FOR PIPE SIZE)

HYDRAULIC RESTRICTION LAYER
(30 MIL PVC LINER)

SUSPENDED PAVEMENT SYSTEM,
UNIT DIMENSION: 48" L X 24" W X 16" H,
2 UNITS STACKED

ASTM C-33 SAND WITH ADDED PROVISION:
75 UM (NO. 200) 0 TO 2%,
VALUE MUST BE OBTAINED BY WASHING



DETAIL 1.2 - SCENARIO 3 PLANTER BOX SECTION
W/ SUSPENDED PAVING TREATMENT

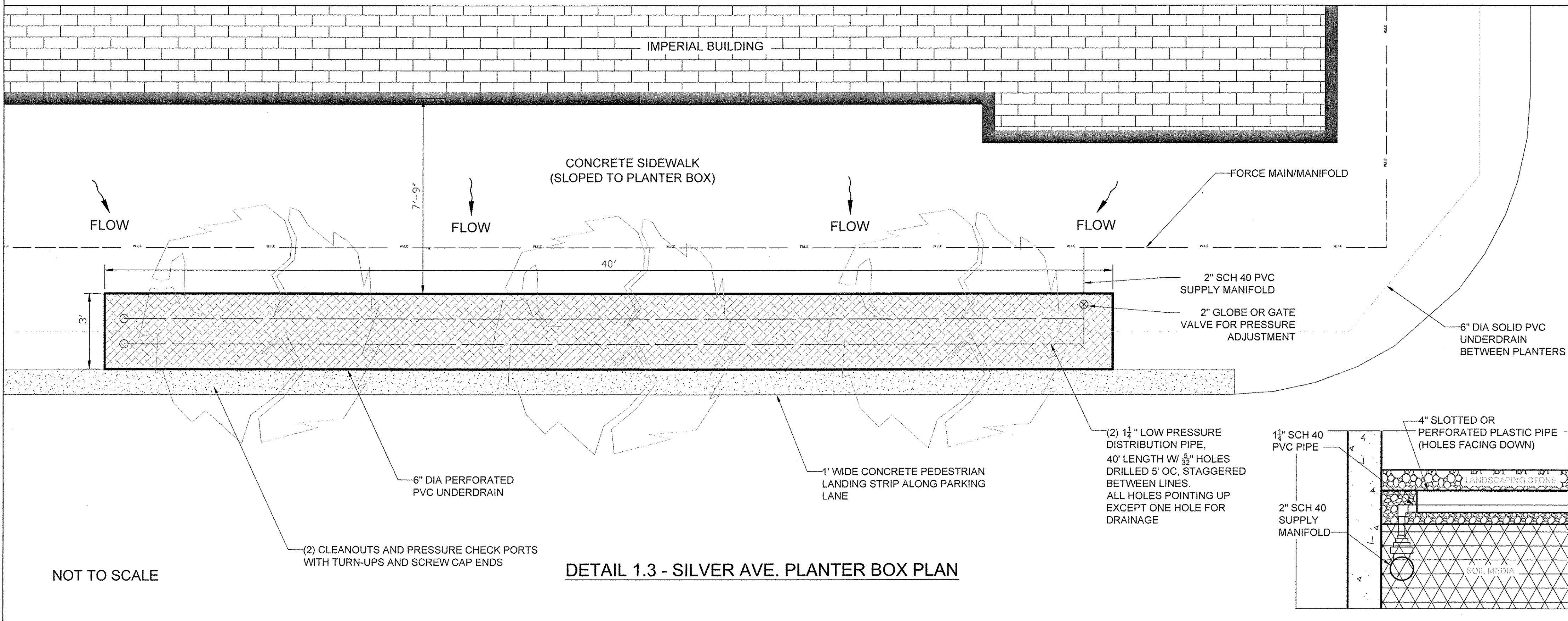
HORIZONTAL REINFORCING NOTES:

1. CONCRETE SHALL BE 560-C-3250 UNLESS OTHERWISE NOTED.
2. REINFORCING STEEL SHALL COMPLY WITH THIS DRAWING UNLESS OTHERWISE SPECIFIED.
3. REINFORCING STEEL SHALL BE INTERMEDIATE GRADE DEFORMED BARS CONFORMING TO LATEST ASTM SPECIFICATIONS.
4. BENDS SHALL BE IN ACCORDANCE WITH LATEST ACI CODE.
5. MINIMUM SPLICE LENGTH FOR REINFORCING SHALL BE 30 DIAMETERS.
6. FLOOR SHALL HAVE A WOOD TROWEL FINISH AND, EXCEPT WHERE USED AS JUNCTION BOXES, SHALL HAVE A MINIMUM SLOPE OF 1:12 TOWARD THE OUTLET.
7. DEPTH V IS MEASURED FROM THE TOP OF THE STRUCTURE TO THE FLOWLINE OF THE BOX.
8. WALL THICKNESS AND REINFORCING STEEL REQUIRED MAY BE DECREASED IN ACCORDANCE WITH TABLE 1.
9. WALL THICKNESS SHALL BE STEPPED ON THE OUTSIDE OF THE BOX.
10. WHEN THE STRUCTURE DEPTH V EXCEEDS 4', STEPS SHALL BE CAST INTO THE WALL AT 15" INTERVALS FROM 15" ABOVE FLOOR TO WITHIN 12" OF TOP OF STRUCTURE. PLACE STEPS IN WALL WITHOUT PIPE OPENING, OTHERWISE OVER OPENING OF SMALLEST DIAMETER.
11. ALTERNATE STEP MAY BE AN APPROVED STEEL REINFORCED POLYPROPYLENE STEP.
12. UPON APPROVAL OF THE ENGINEER, AS DEFINED BY SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, THE USE OF PRECAST STORM STRUCTURES IS ACCEPTABLE AS AN ALTERNATE TO CAST-IN-PLACE. PRECAST UNITS SHALL CONFORM TO ASTM STANDARDS AND BE MANUFACTURED IN A PERMANENT FACILITY DESIGNED FOR THAT PURPOSED.

TABLE 1. BOX SECTION REINFORCEMENT			
MAXIMUM SPAN X OR Y	DEPTH V	THICKNESS T	HOR. & FLR. REINF.
3'-0" TO 4'-0"	4'-0"	6"	#4 18"
4'-1" TO 7'-0"		6"	#4 12"
7'-1" TO 8'-0"		6"	#4 8"
3'-0" TO 4'-0"	4'-1" TO 8'-0"	6"	#4 18"
4'-1" TO 5'-0"		6"	#4 12"
5'-1" TO 6'-0"		6"	#4 8"
6'-1" TO 8'-0"		6"	#4 6"

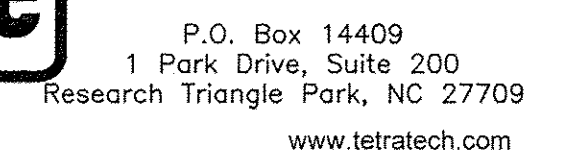
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DETAIL 1.3 - SILVER AVE. PLANTER BOX PLAN



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GRADING PLAN
PLAN

OF

DETAIL 2.1 - NUISANCE FLOW PRE-TREATMENT AND PUMP TANKS

4. RUNOFF FROM THE SIDEWALKS IS DIRECTLY TREATED BY THE PLANTER BOXES.
5. RUNOFF FROM THE PARKING RAMP AND ADJACENT SIDEWALK AREAS DRAINS TO THE 3500 GAL COLLECTION TANK LOCATED UNDER THE PARKING GARAGE.
6. FIRST FLOAT IN COLLECTION TANK TURNS OFF DIVERSION PUMP FROM EXISTING 60" RCP (AND STOPPING FLOW TO PUMP BASIN) AND OVERRIDES THE TIMER TO DELIVER A FULL DOSE TO THE PLANTER BOXES.
7. SECOND FLOAT ACTIVATES THE TRANSFER PUMP THAT PUMPS WATER TO THE PUMP BASIN AT A RATE THAT DOESN'T EXCEED THE DOSING SCHEDULE (SEE TRANSFER RATE, TABLE 2).
8. FLOW VOLUMES IN EXCESS OF THE 3500 GAL CAPTURE VOLUME OVERTFLOW TO THE EXISTING 60" RCP.

DETAIL 2.2 - 3500 GAL PARKING RAMP COLLECTION TANK

SHEET NO.