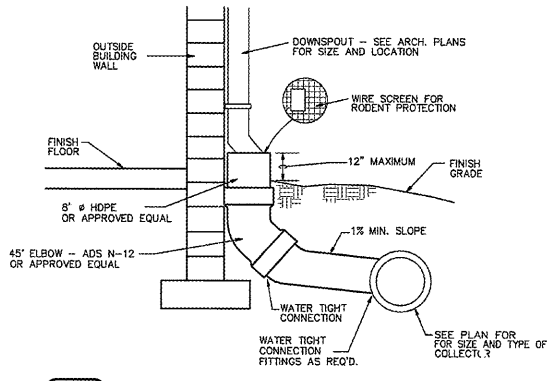
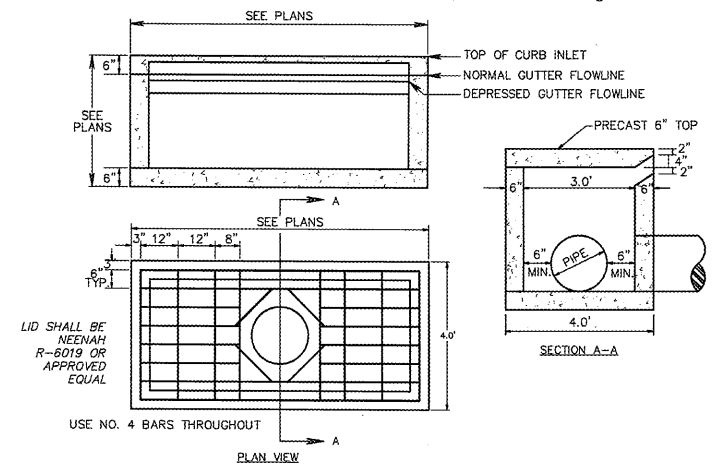


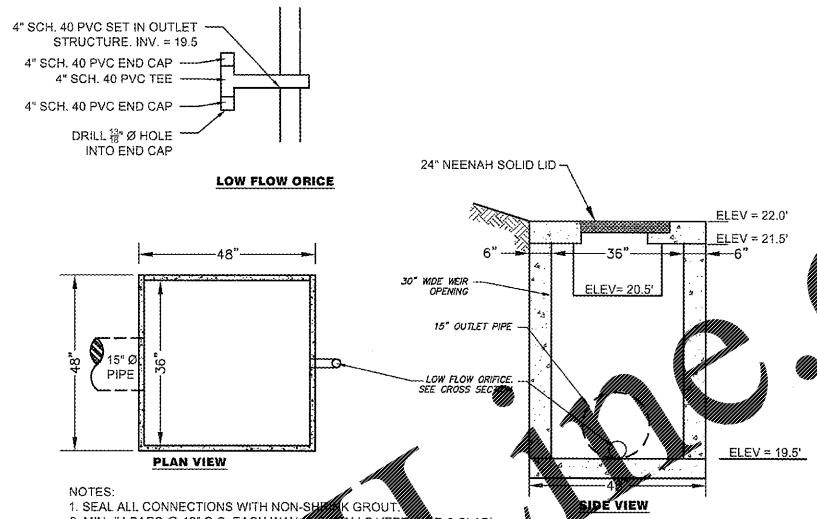
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1736 EAST SUNSHINE, SUITE 417
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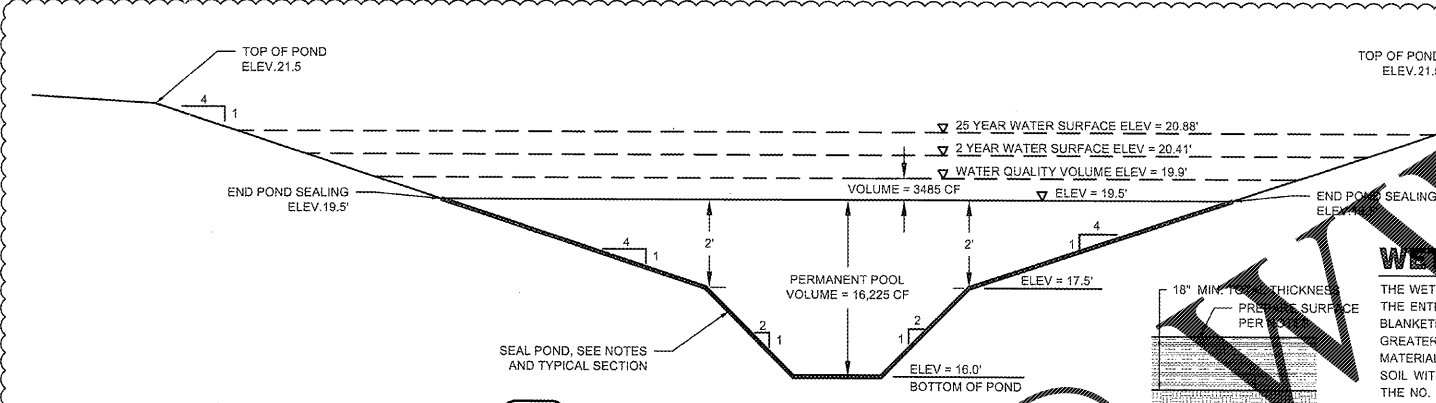
1 DOWNSPOUT COLLECTOR
C1.2 SCALE: NOT TO SCALE



2 CURB INLET
C1.2 SCALE: NOT TO SCALE

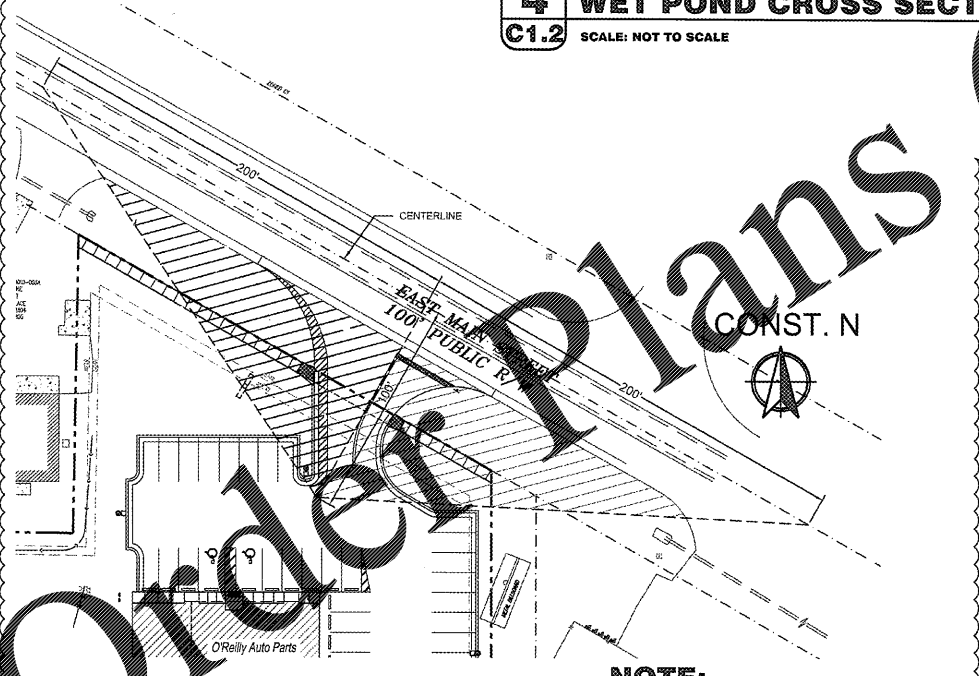


3 DETENTION OUTLET STRUCTURE
C1.2 SCALE: NOT TO SCALE



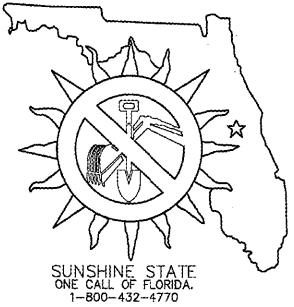
4 WET POND CROSS SECTION
C1.2 SCALE: NOT TO SCALE

WET POND SEALING:
THE WET DETENTION POND SHALL BE BLANKETED WITH SUITABLE SOILS. THE ENTIRE AREA OVER WHICH WATER IS TO BE IMPOUNDED SHALL BE BLANKETED. UPPER 6" OF THE SUBGRADE SHALL BE FREE OF ROCKS GREATER THAN 3", SCARIFIED, AND COMPACTED TO 95%. THE BLANKET MATERIAL SHOULD CONSIST OF A WELL-GRADED 2% BENTONITE TO CLAY SOIL WITH A MAXIMUM ROCK SIZE OF 1.5" AND AT LEAST 70% PASSING THE NO. 200 SIEVE. POWDERED BENTONITE SHALL BE ADDED ON A DRY WEIGHT BASIS AND MIXED BY A ROTOTILLER OR PULVERIZER. EACH LAYER SHALL BE MIXED A SECOND TIME PERPENDICULAR TO THE FIRST AND THEN COMPACTED WITH A SHEEPSFOOT ROLLER TO 95% AT +2% OMC WITHIN 2 HOURS. AFTER COMPACTING THE FINAL LAYER, THE SURFACE SHALL BE SEALED WITH A SMOOTH DRUM ROLLER. THE MINIMUM THICKNESS OF BLANKET MATERIAL SHALL BE 18 INCHES. THE BLANKET SHOULD BE PROTECTED FROM CRACKING THAT RESULTS FROM DRYING.



5 VISIBILITY TRIANGLE
C1.2 SCALE: 1" = 40'-0"

NOTE:
CLEAR VISIBILITY TRIANGLE LIMIT. NOTHING SHALL BE ERRECTED, PLACED, PARKED, PLANTED, OR ALLOWED TO GROW IN SUCH A MANNER AS TO MATERIALLY IMPEDE VISION BETWEEN A HEIGHT OF TWO (2) FEET AND TEN (10) FEET ABOVE THE GRADE, MEASURED AT THE CENTERLINE OF THE INTERSECTION.



WATER QUALITY SUMMARY:

THE REQUIRED WATER QUALITY VOLUME IS 1.0 INCHES OF RAINFALL OVER THE WATERSHED.

1. WATER QUALITY VOLUME REQUIRED:
1" RAINFALL OVER DRAINAGE AREA
 $WQ_v = 1" \cdot 0.96 \text{ AC} \cdot 43560 \text{ SF/AC} \cdot 12" = 3485 \text{ CF}$
2. TREATMENT VOLUME ELEVATION:

ELEVATION (feet)	VOLUME (cf)	SUM (cf)	STORM (year)
19.50	0	0	0
20.00	4227	4227	WQv
3. PERMANENT POOL VOLUME (PPV) REQUIRED:
 - CALCULATED PPV REQUIRED = 9,278 CF
 - NO LITTORAL ZONE, SO ADDITIONAL 50% 19,899
 - REQUIRED = 1.5" 9,278 CF = 13,916 CF
 - PPV PROVIDED = 16,225 CF
4. ORIFICE SIZE:
 - CALCULATED ORIFICE DIAMETER TO DRAWDOWN HALF OF WATER QUALITY VOLUME IN 48-60 HOURS = 1 1/2"
5. AVERAGE POND DEPTH:
 - 16,225 CF / 6968 SF = 2.3 FEET

STORM WATER RUNOFF SUMMARY:

TOTAL DRAINAGE AREA = 0.96 ACRES
TOTAL DISTURBED AREA = 1.4 ACRES > 1.0 ACRES THEREFORE NOI IS REQUIRED.

1. ON-SITE AREAS & CURVE NUMBERS

PRE-DEVELOPMENT	POST-DEVELOPMENT
PERVIOUS AREA: PERVIOUS = 0.96 ACRES (CN = 39)	PERVIOUS AREA: GRASS = 0.22 ACRES (CN = 39)
IMPERVIOUS AREA: PARKING LOT & BUILDING = 0.00 ACRES (CN = 98)	IMPERVIOUS AREA: PARKING LOT, BUILDING, AND POND = 0.74 ACRES (CN = 98)
COMPOSITE CURVE NUMBER, CN = 39	COMPOSITE CURVE NUMBER, CN = 64
2. TIME OF CONCENTRATION:
EXISTING AND PROPOSED DEVELOPMENT
 $T_c = 5 \text{ MIN}$
3. PRECIPITATION DATA: NOAA ATLAS 14, VOLUME 9, VERSION 2

STORM EVENT	2 YR	25 YR
RAINFALL DEPTH, (IN)	5.52	10.5
RETURN PERIOD (YR)	2	25
4. EXISTING SITE RUNOFF:

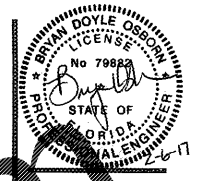
FLOW, cfs	2 YR	25 YR
Q pre =	0.092	2.19
5. PROPOSED SITE RUNOFF:

FLOW, cfs	2 YR	25 YR
Q post =	4.04	8.81
6. DETENTION VOLUME PROVIDED:

ELEVATION (feet)	VOLUME (cf)	SUM (cf)	STORM (year)	ELEVATION (ft)	DETECTION FLOW OUT (cfs)	REGULATION FLOW OUT (cfs)
19.50	0	0	2 YR	20.41	0.089	0.082
20.00	4320	4320	25 YR	20.88	2.00	2.19
21.00	12035	16355	25 YR			

PER WATER MANAGEMENT DISTRICT AND CITY OF FREEPORT LAND DEVELOPMENT CODE AND CITY ENGINEER, THE FIRST 1 INCH OF RUNOFF SHALL BE RETAINED ON THE SITE AND THE 2 AND 25 YEAR STORM EVENT MUST BE RELEASED AT OR BELOW EXISTING RATES. THE PROPOSED DETENTION WILL RETAIN THE FIRST 1 INCH OF RUNOFF AND STORE AND RELEASE THE 2 AND 25 YEAR STORM EVENT AT OR BELOW EXISTING RATE. ALL STORMWATER IS DISCHARGED FROM THE PROPOSED POND TO THE LOW SPOT ON THE SOUTH SIDE OF THE SITE ADJACENT TO UNIMPROVED ADAMS STREET RIGHT-OF-WAY PER EXISTING DRAINAGE PATTERNS.

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EAST MAIN STREET
FREEPORT, FL
STORMWATER DETAILS

O'Reilly AUTO PARTS
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COMM #	3924
DATE:	09-16-16
REVISION	
DATE:	2-6-17