

Project Narrative/Notes/Revisions

- 1) 3/18/13 CA - DESIGN CHANGES.
- 2)

Reeve & Associates, Inc. - Solutions You Can Build On

EDGEWATER ESTATES

Phase-1 Improvement Plans

NHUNTSVILLE, WEBER COUNTY, UTAH
MARCH, 2013



Vicinity Map
NOT TO SCALE

Sheet Index

- Sheet 1 - Cover/Index Sheet
- Sheet 2 - Drainage & Grading Plan
- Sheet 3 - Utility Plan
- Sheet 4 - Details



General Notes

1. CONSTRUCTION STAKING TO BE PROVIDED BY REEVE & ASSOCIATES, INC.
2. ANY MODIFICATION TO THIS CONSTRUCTION PACKAGE OR TO THE CONSTRUCTION SCHEDULE SHALL BE APPROVED BY THE ENGINEER PRIOR TO SAID APPROVAL, ALL IMPROVEMENT DRAWINGS SHALL BE RESUBMITTED AND APPROVED BY THE ARCHITECT.
3. THE CONTRACTOR SHALL LOCATE, RETAIN AND PROTECT ALL EXISTING UTILITIES UNLESS OTHERWISE DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE.
4. THE CONTRACTOR SHALL MAINTAIN 10 FOOT HORIZONTAL AND 18 INCH VERTICAL SEPARATION, CULINARY WATER LINES, SANITARY SEWER, AND STORM DRAIN LINES.
5. THE CONTRACTOR SHALL INSTALL ALL SANITARY SEWER MAINS, SERVICE LINES AND STORM DRAIN LINES PRIOR TO INSTALLING ANY WATER SYSTEM IMPROVEMENTS. ADJUST WATER MAIN DEPTH PER JURISDICTION AS REQUIRED TO AVOID SANITARY SEWER SERVICE LINES.
6. CONTRACTOR SHALL NOTIFY ARCHITECT OF ALL UTILITY CONFLICTS UPON DISCOVERY.
7. CONTRACTOR SHALL COORDINATE CONSTRUCTION AND INSTALLATION OF ELECTRICAL, TELEPHONE, NATURAL GAS AND CABLE TV SERVICES WITH THE RESPECTIVE UTILITY COMPANY. OWNER SHALL PAY ALL ASSOCIATED UTILITY COMPANY FEES.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER SLOPE AND CONSTRUCTION OF CONNECTING SEWER PIPING.
9. CONTRACTOR SHALL BE RESPONSIBLE OF PROPER BACKFILLING, COMPACTING, AND PAVEMENT RESTORATION.
10. CONTRACTOR TO OBTAIN ALL NECESSARY PERMIT(S) AND COMPLY WITH ALL PERMITTING REQUIREMENTS.
11. ALL THRUST BLOCKS SHALL BE POURED IN PLACE AGAINST UNDISTURBED SOIL. ALL VALVES, FITTINGS, AND APPURTENANCES TO BE BLOCKED.
12. ALL EXPOSED NUTS AND BOLTS WILL BE COATED WITH A NON-OXIDE WASH AND WRAPPED IN 8-MIL POLYETHYLENE AS DIRECTED BY GEOTECHNICAL STUDY.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL ACCORDING TO GOVERNING AGENCIES STANDARDS. WET DOWN DRY MATERIALS AND RUBBISH TO PREVENT BLOWING.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ADJACENT SURFACE IMPROVEMENTS DURING CONSTRUCTION.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY SETTLEMENT OF OR DAMAGE TO EXISTING UTILITIES FOR WARRANTY PERIOD.
16. ALL EXISTING ASPHALT SHALL BE SAW CUT IN NEAT STRAIGHT LINES BY THE CONTRACTOR PRIOR TO EXCAVATION.
17. CONTRACTOR TO INSTALL MAGNETIC LOCATING TAPE CONTINUOUSLY OVER ALL PVC PIPING.
18. THE CONTRACTOR IS RESPONSIBLE TO FURNISH ALL MATERIALS TO COMPLETE PROJECT.
19. TRAFFIC CONTROL IS TO CONFORM TO THE CURRENT CITY AND/OR STATE TRANSPORTATION ENGINEERS' MANUAL.
20. A UPDES GENERAL CONSTRUCTION STORM WATER PERMIT MUST BE OBTAINED BY THE GENERAL CONTRACTOR PRIOR TO COMMENCING CONSTRUCTION.
21. ALL WORK SHALL CONFORM TO WEBER COUNTY STANDARD SPECIFICATIONS AND DRAWINGS.

Engineer's Notice To Contractors

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED FROM AVAILABLE INFORMATION PROVIDED BY OTHERS. THE LOCATIONS SHOWN ARE APPROXIMATE AND SHALL BE CONFIRMED IN THE FIELD BY THE CONTRACTOR, SO THAT ANY NECESSARY ADJUSTMENT CAN BE MADE IN ALIGNMENT AND/OR GRADE OF THE PROPOSED IMPROVEMENT. THE CONTRACTOR IS REQUIRED TO CONTACT THE UTILITY COMPANIES AND TAKE DUE PRECAUTIONARY MEASURE TO PROTECT ANY UTILITY LINES SHOWN, AND ANY OTHER LINES OBTAINED BY THE CONTRACTOR'S RESEARCH, AND OTHERS NOT OF RECORD OR NOT SHOWN ON THESE PLANS.

Contact:

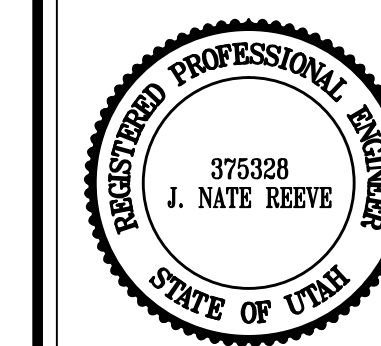
REESE HOWELL, JR.
CELTIC BANK 268 S. STATE
STREET, UT. 84111
PH: (801) 363-6500

Blue Stakes Location Center

Call: Toll Free
1-800-662-4111
Two Working Days Before You Dig

REVISIONS	DATE	DESCRIPTION
7-20-12	RH	Utility Changes
7-31-12	RH	Design Complete
9-14-13	CA	Design Complete

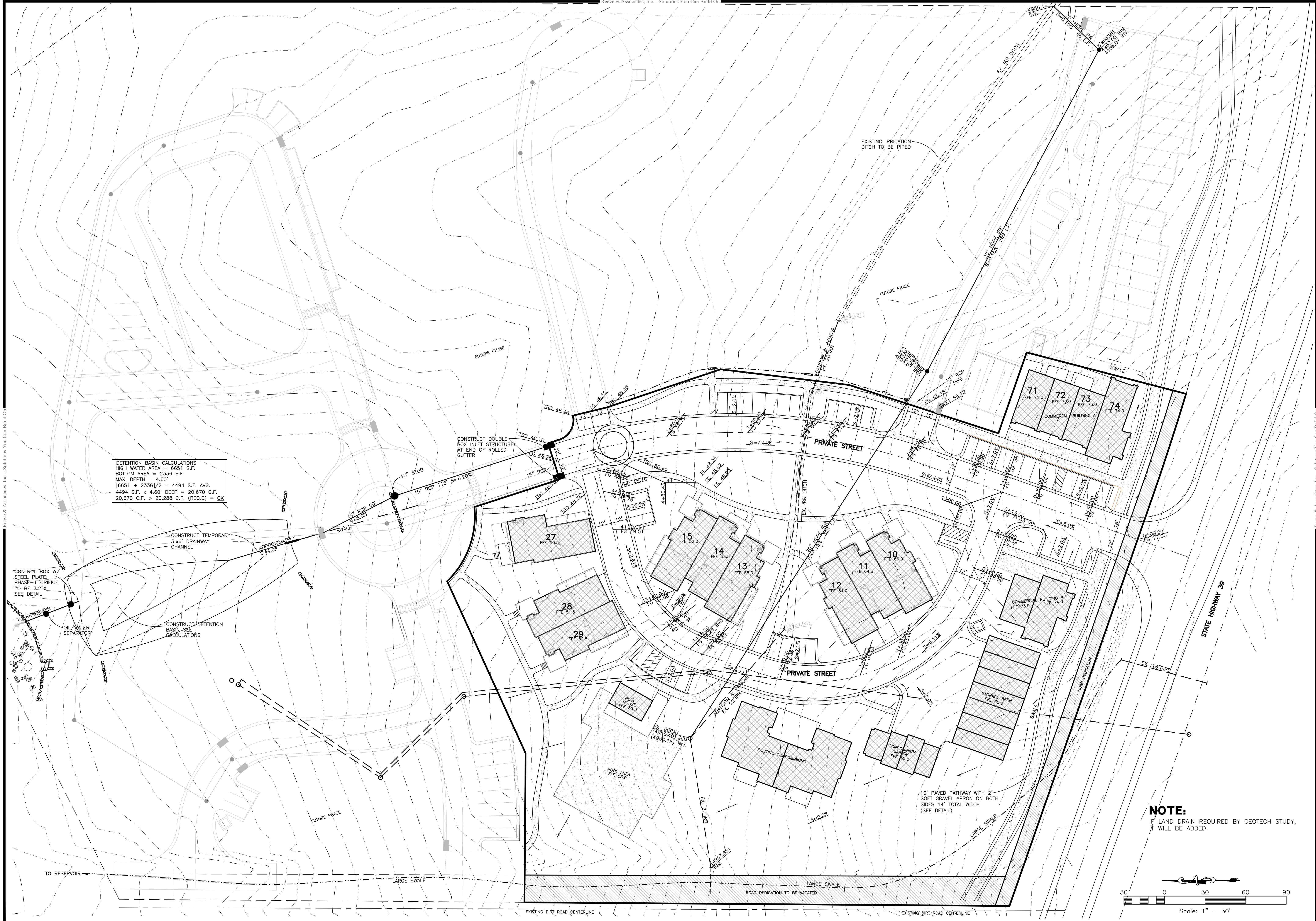
Edgewater Beach Resort
Phase-1
WEBER COUNTY, UTAH
COVER SHEET



Project Info.

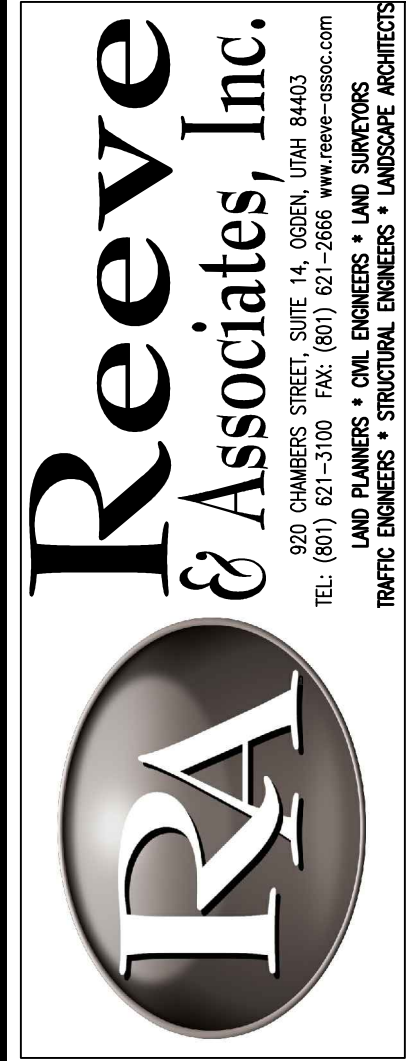
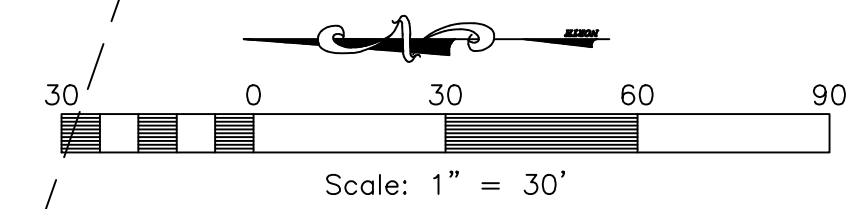
Engineer: J. NATE REEVE, P.E.
 Drafter: R. HANSEN
 Begin Date: JULY 09, 2012
 Name: EDGEWATER ESTATES PHASE-1
 Number: 5917-15

Sheet **4**
1 Sheets



DETENTION BASIN CALCULATIONS
 HIGH WATER AREA = 6651 S.F.
 BOTTOM AREA = 2336 S.F.
 MAX. DEPTH = 4.60'
 $[6651 + 2336] / 2 = 4494$ S.F. AVG.
 $4494 \text{ S.F.} \times 4.60' \text{ DEEP} = 20,670 \text{ C.F.}$
 $20,670 \text{ C.F.} > 20,285 \text{ C.F. (REQ'D)} = \text{OK}$

NOTE:
 IF LAND DRAIN REQUIRED BY GEOTECH STUDY,
 IT WILL BE ADDED.



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7-20-12	RH	Utility Changes
7-31-12	RH	Design Complete
9-14-13	CA	Design Complete

**Edgewater Beach Resort
 Phase-1
 WEBER COUNTY, UTAH
 GRADING PLAN**



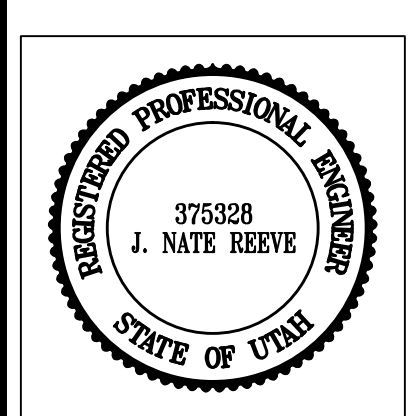
Project Info.
 Engineer: J. NATE REEVE, P.E.
 Drafter: R. HANSEN
 Begin Date: JULY 09, 2012
 Name: EDGEWATER ESTATES PHASE-1
 Number: 5917-15



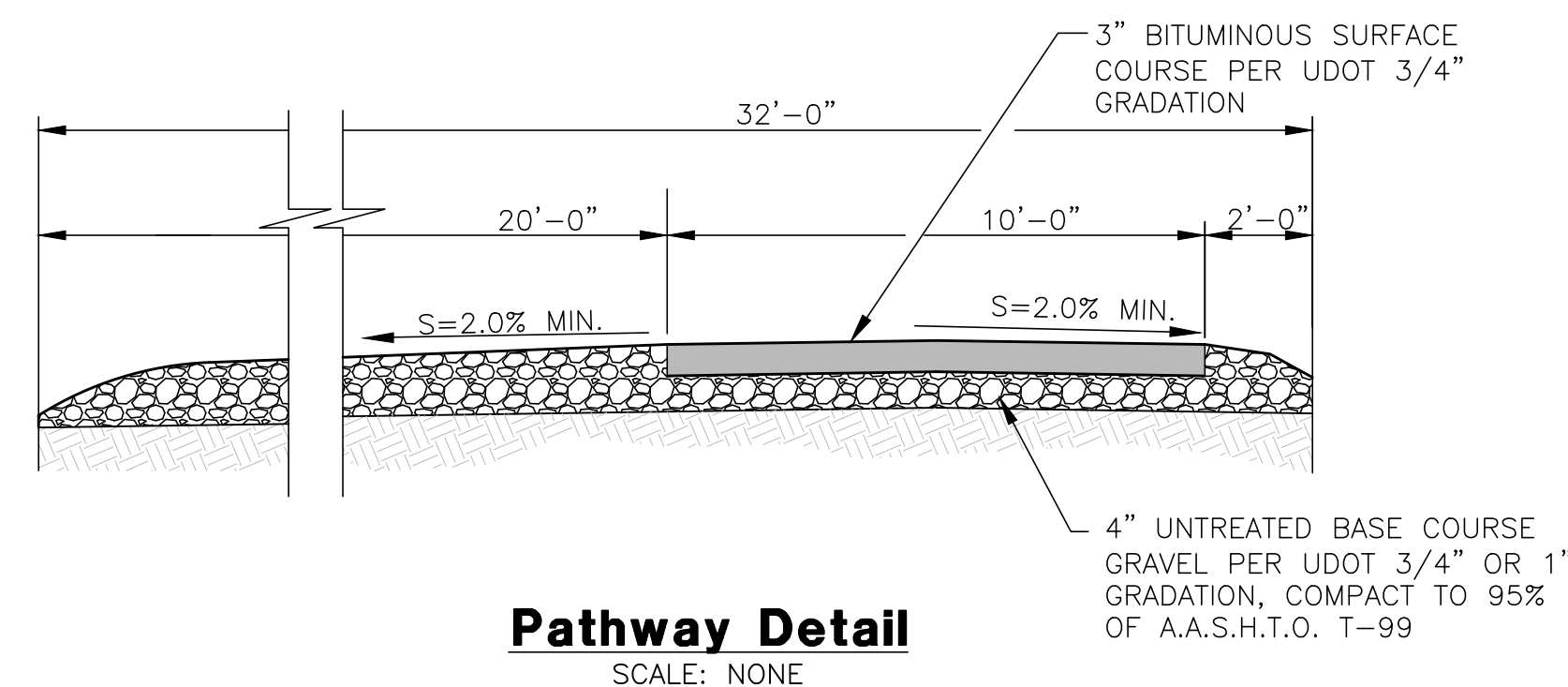
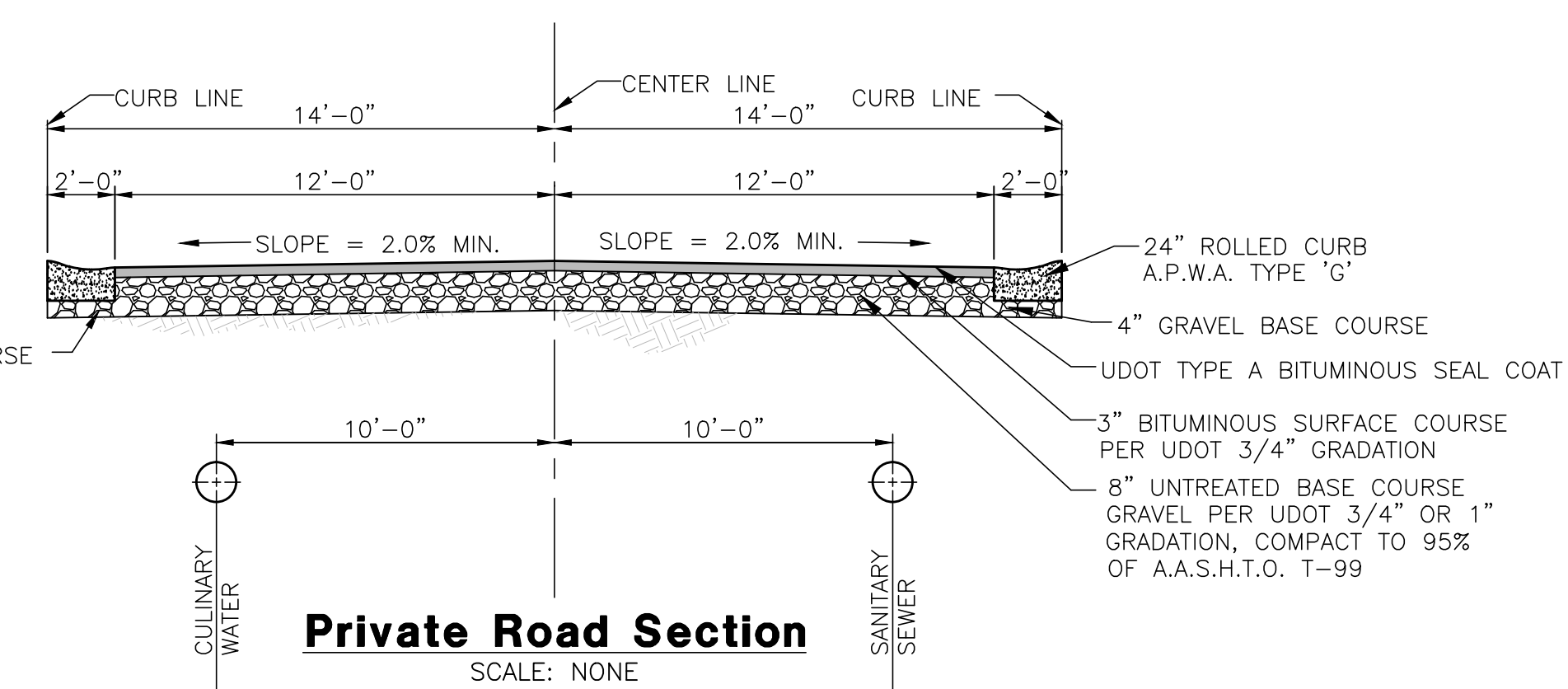
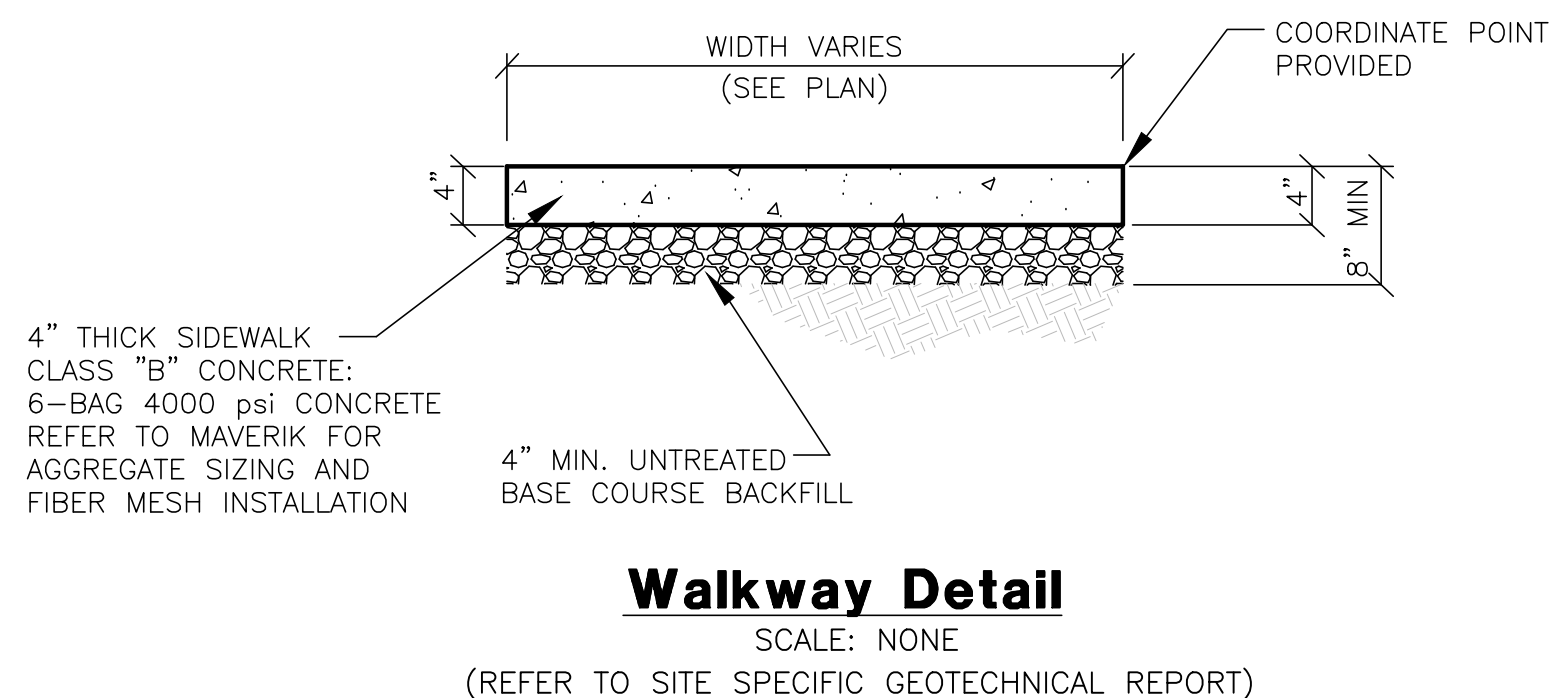
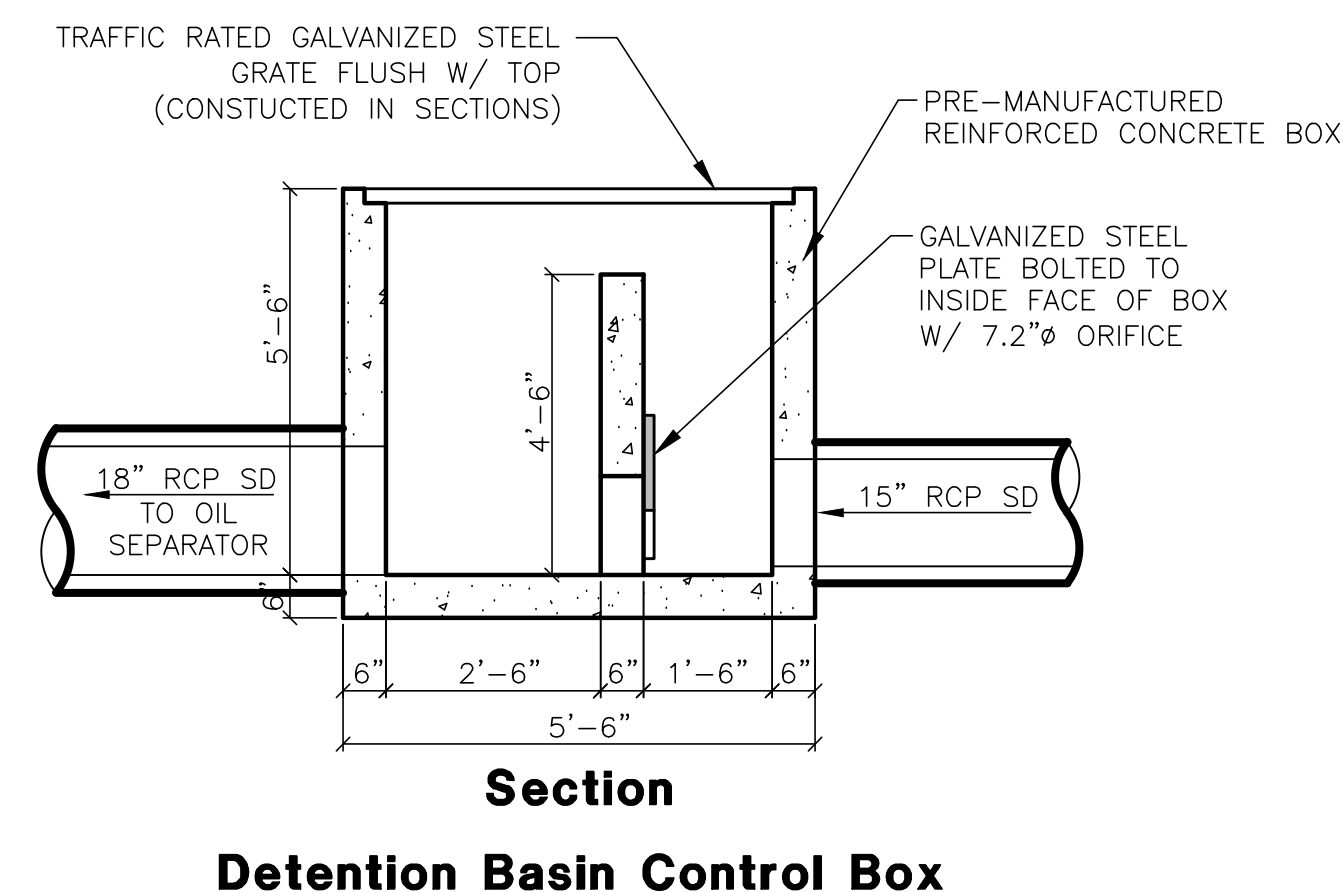
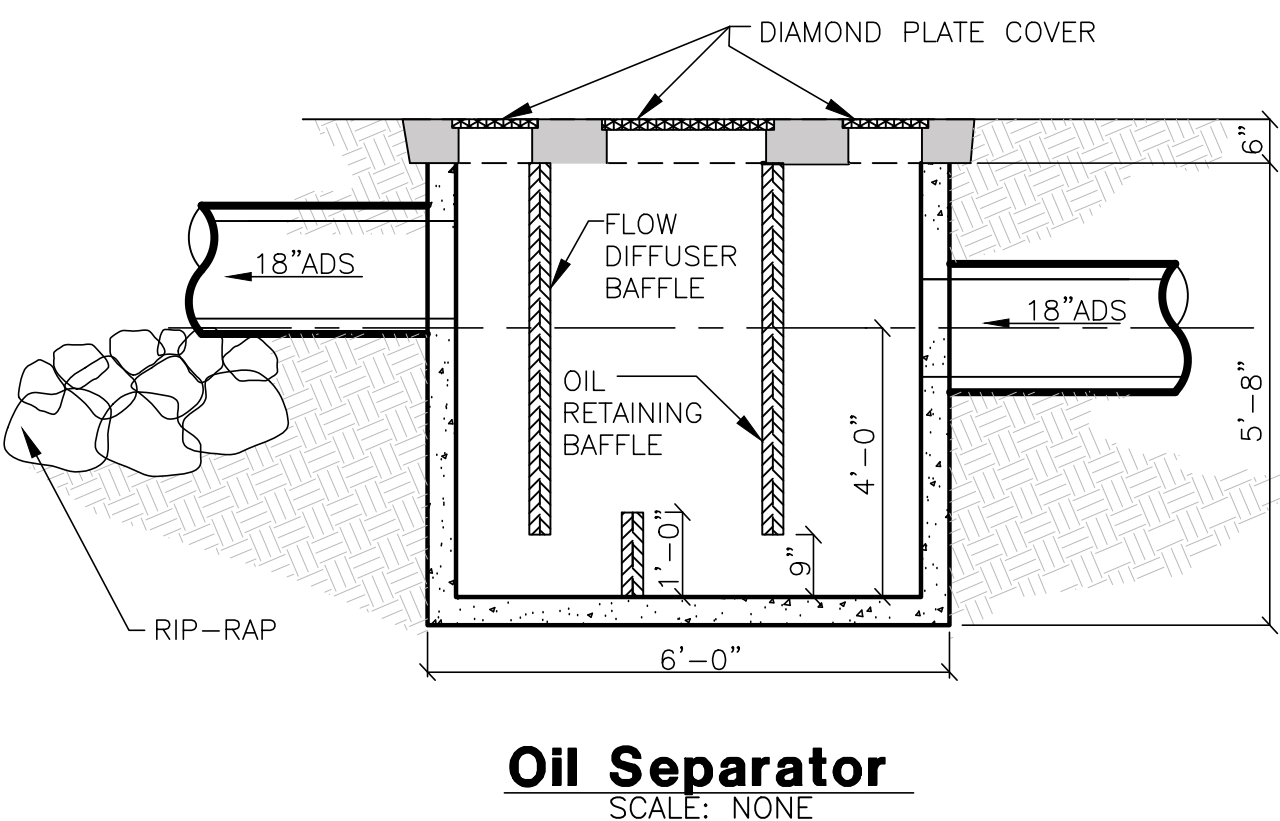
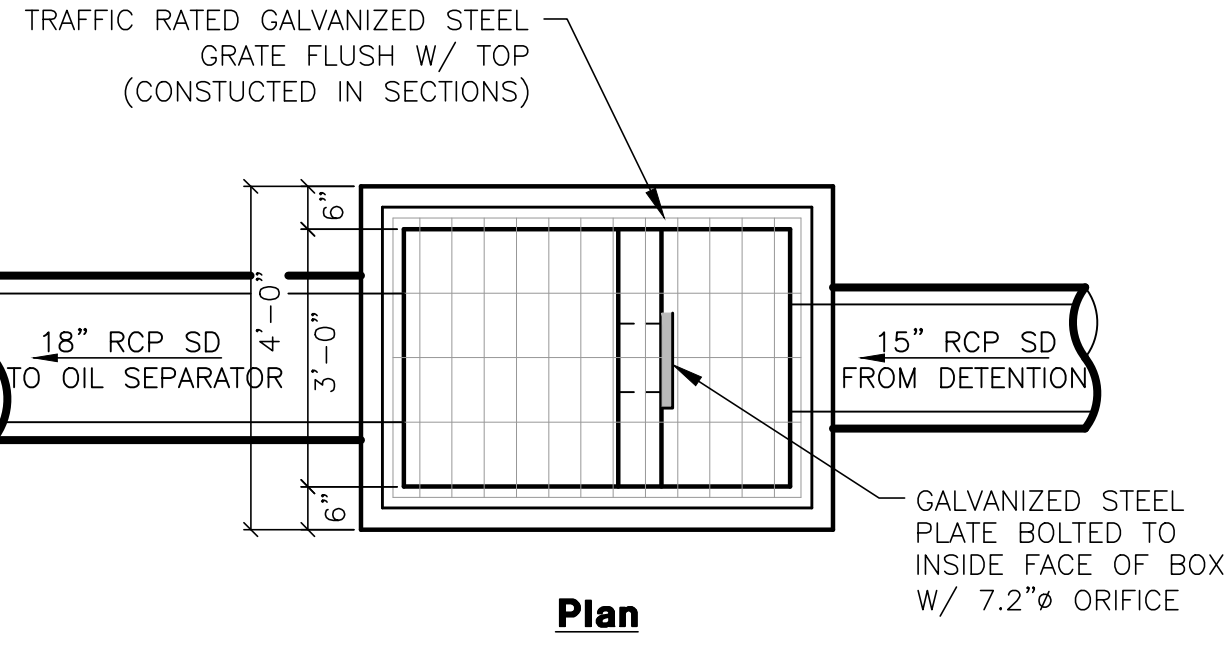
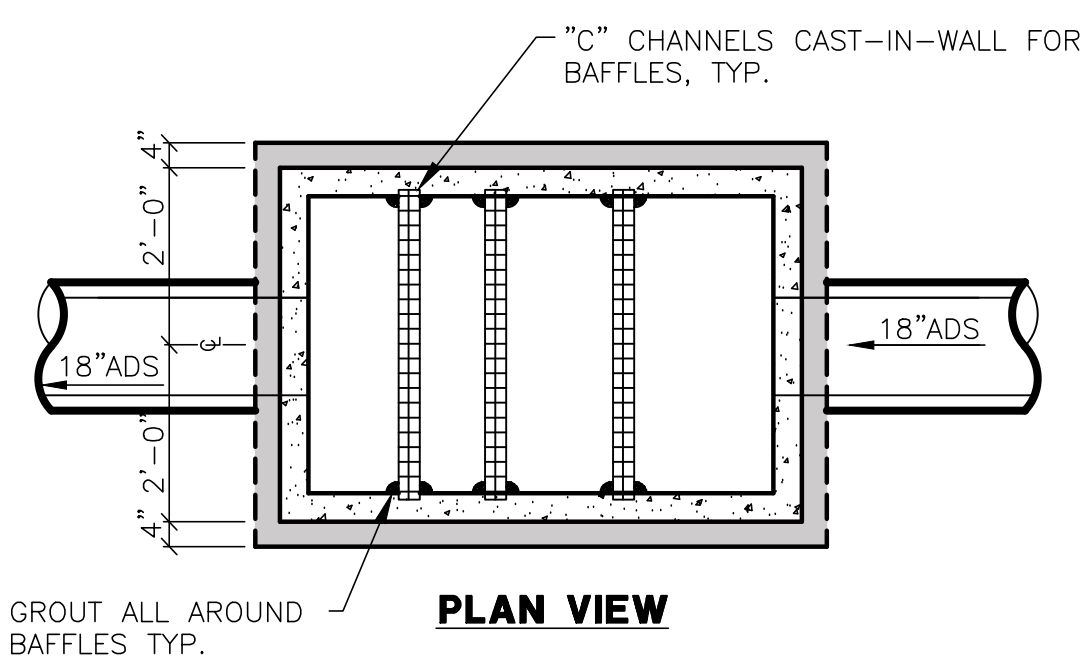
Reeve & Associates, Inc.
 920 CHAMBERS STREET, SUITE #14, OGDEN, UTAH 84403
 TEL: (801) 621-3100 FAX: (801) 621-2666 WWW.REEVE-ASSOC.COM
 LAND PLANNERS • CIVIL ENGINEERS • LAND SURVEYORS
 TRAFFIC ENGINEERS • STRUCTURAL ENGINEERS • LANDSCAPE ARCHITECTS

REVISIONS	DATE	DESCRIPTION
7-20-12	RH	Utility Changes
7-31-12	RH	Design Complete
9-14-13	CA	Design Complete

Edgewater Beach Resort Phase-1
 WEBER COUNTY, UTAH
UTILITY PLAN



Project Info.
 Engineer: J. NATE REEVE, P.E.
 Drafter: R. HANSEN
 Begin Date: JULY 09, 2012
 Name: EDGEWATER ESTATES PHASE-1
 Number: 5917-15



Storm Runoff Calculations

Edgewater Estates-Phase 1

7/31/2012
The following runoff calculations are based on the Rainfall - Intensity - Duration Frequency Curve for the Huntsville, UT area taken from data compiled by NOAA Atlas14, using a 100 year storm.

Runoff storm water has been calculated for two different sets of conditions, one being the existing undeveloped land and the other with land fully improved. The difference between the two quantities will be detained in a holding pond. All water that runs off and over the property at present will be diverted into the holding pond and released at a reduced rate into the existing drainage system.

The calculations are as follows:

1. Runoff from the undeveloped existing land.	C =	0.2
Runoff Coefficient	i =	3.20 IN./HR.
Rainfall Intensity	Q =	CIA
Runoff Quantity	A =	3.80 ACRES
Acreage		

$Q(out) = C \cdot i \cdot A = 2.43$ CFS

2. Runoff from developed land		
Runoff Coefficients		
Paved Area	39,774	C = 0.9
Landscaped Area	97,776	C = 0.2
Roof	28,173	C = 0.8

Weighted Runoff Coefficient C = 0.47

Rainfall Intensity	i =	varies with time
Runoff Quantity	Q =	CIA

3. Detention Basin	
Volume in	Q * t
Volume out	2.43 * t

The capacity of the detention basin is calculated as the maximum difference between the volume flowing in and the volume flowing out.

The outflow from the detention basin is limited to outflow if undeveloped. Use 2.43 cfs for Q outflow

The required volume of the detention basin is 5,917 cubic feet

USE A 7.2 INCH DIAMETER ORIFICE AT OUTLET

Storm Runoff Calculations

Edgewater Estates-Full

7/31/2012
The following runoff calculations are based on the Rainfall - Intensity - Duration Frequency Curve for the Huntsville, UT area taken from data compiled by NOAA Atlas14, using a 100 year storm.

Runoff storm water has been calculated for two different sets of conditions, one being the existing undeveloped land and the other with land fully improved. The difference between the two quantities will be detained in a holding pond. All water that runs off and over the property at present will be diverted into the holding pond and released at a reduced rate into the existing drainage system.

The calculations are as follows:

1. Runoff from the undeveloped existing land.	C =	0.2
Runoff Coefficient	i =	3.20 IN./HR.
Rainfall Intensity	Q =	CIA
Runoff Quantity	A =	13.02 ACRES
Acreage		

$Q(out) = C \cdot i \cdot A = 8.34$ CFS

2. Runoff from developed land		
Runoff Coefficients		
Paved Area	135,807	C = 0.9
Landscaped Area	334,282	C = 0.2
Roof	97,276	C = 0.8

Weighted Runoff Coefficient C = 0.47

Rainfall Intensity	i =	varies with time
Runoff Quantity	Q =	CIA

3. Detention Basin	
Volume in	Q * t
Volume out	8.34 * t

The capacity of the detention basin is calculated as the maximum difference between the volume flowing in and the volume flowing out.

The outflow from the detention basin is limited to outflow if undeveloped. Use 8.34 cfs for Q outflow

The required volume of the detention basin is 20,288 cubic feet

USE A 13.3 INCH DIAMETER ORIFICE AT OUTLET

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REVISIONS	DATE	DESCRIPTION
	7-20-12	RH Utility Changes
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	9-14-13	CA Design Complete

Edgewater Beach Resort Phase-1
WEBER COUNTY, UTAH
CIVIL DETAILS

REGISTERED PROFESSIONAL ENGINEER
375328
J. NATE REEVE
STATE OF UTAH

Project Info.
Engineer: J. NATE REEVE, P.E.
Drafter: R. HANSEN
Begin Date: JULY 09, 2012
Name: EDGEWATER ESTATES PHASE-1
Number: 5917-15

Sheet	4
4	Sheets