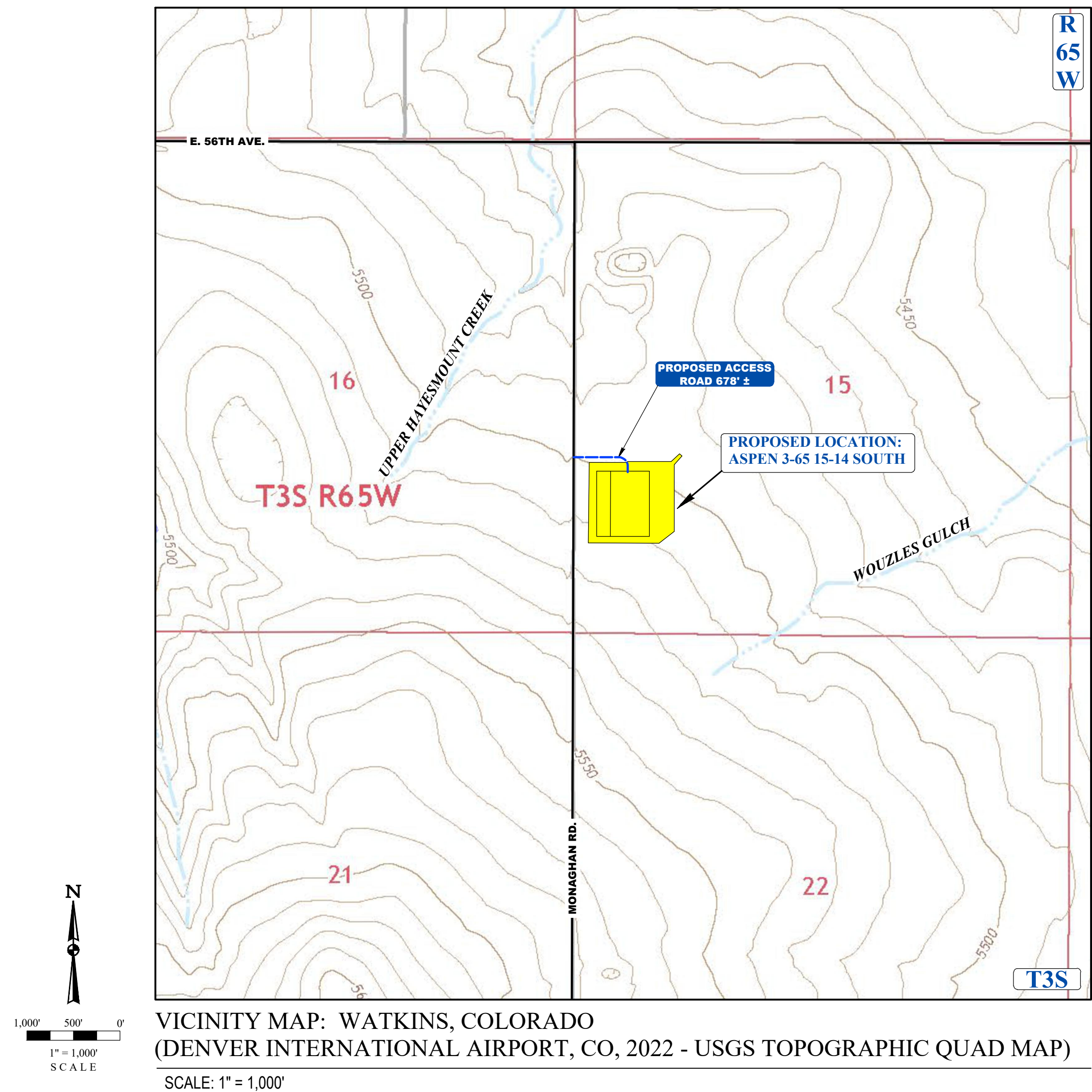


W 1/2 SW 1/4, SECTION 15, TOWNSHIP 3 SOUTH, RANGE 65 WEST, OF THE 6TH PRINCIPAL MERIDIAN  
CITY OF AURORA, COUNTY OF ADAMS, STATE OF COLORADO

SHEET INDEX	
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PRODUCTION OPERATIONS OFF-SITE DRAINAGE PLAN	2
PRODUCTION OPERATIONS ON-SITE DRAINAGE PLAN OVERVIEW	3
PRODUCTION OPERATIONS ON-SITE DRAINAGE PLAN	4-7



1. **PLAN NOTES:**

2. CITY OF AURORA PLAN REVIEW IS ONLY FOR GENERAL CONFORMANCE WITH CITY OF AURORA DESIGN CRITERIA AND THE CITY CODE. THE CITY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND ELEVATIONS WHICH SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE. THE CITY OF AURORA, THROUGH THE APPROVAL OF THIS DOCUMENT, ASSUMES NO RESPONSIBILITY FOR THE COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

3. APPROVAL OF THIS DOCUMENT BY THE CITY DOES NOT IMPLY THAT ANY OFFSITE WORK FOR ANY OFFSITE WORK ON ADJACENT PRIVATE PROPERTY IT IS THE OWNER'S RESPONSIBILITY TO COORDINATE WITH ADJACENT PROPERTY OWNERS AND OBTAIN ALL NECESSARY APPROVALS AND EASEMENTS FOR SUCH WORK. IF APPROVALS ARE NOT OBTAINED BY THE START OF CONSTRUCTION, REVISIONS TO CIVIL PLANS WILL BE REQUIRED.

4. SEE THE STANDARD NOTES AND DETAILS IN THE FIELD WIDE SWMP REPORT (EDN 21195E52), APPROVED SEPTEMBER 28, 2022, FOR ALL STANDARD DETAILS & CITY OF AURORA RULES AND REGULATIONS REGARDING STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES, NOTES AND LEGENDS OF BMP NAMES AND SYMBOLS.

5. ALL PRIVATE DIVERSION DITCHES/SWALES ARE ANTICIPATED TO BE UNLINED.

6. CRESTONE PEAK RESOURCES OPERATING LLC WILL ENSURE THAT THE PROVISIONS OF CRS 37-92-602, AS AMENDED BY SENATE BILL 15-212, REGARDING NOTIFICATION OF DOWNSTREAM WATER RIGHTS HOLDERS ARE UPHOLD.

7. PROJECT AREA IS FOUND ON FIRM PLANS 08005C0066L DATED 2/17/2017 AND 08005C0067L DATED 9/28/2016, AND IS LOCATED IN FLOOD ZONE X.

8. DESIGN MAJOR STORM: 100-YR STORM, DESIGN MINOR STORM: 2-YR STORM.

9. ALL STORM INFRASTRUCTURE IS SIZED FOR THE 100-YR EVENT AND WILL BE PRIVATELY MAINTAINED BY CRESTONE PEAK RESOURCES OPERATING LLC.

10. REFERENCE SECTION 8 OF THE DRAINAGE REPORT FOR A DISCUSSION OF THE SITE IN RELATION TO THE NEAREST FLOODPLAIN.

11. THE PRIVATE SWALES SHALL BE MAINTAINED BY CRESTONE PEAK RESOURCES OPERATING LLC, AND SLOPES LESS THAN 2% PERMITTED, PROVIDED A MINIMUM 0.5% SLOPE PROVIDED IN ALL SWALES, AND UNDERDRAINS ARE PROVIDED IN THE SWALES WITH LESS THAN 2% SLOPE. OTHERWISE, REVISIONS SHALL BE SUBMITTED FOR SWALE/CHANNEL SECTIONS THAT MEET ALL COA CRITERIA FOR PERMANENT INFRASTRUCTURE. IN ADDITION, THE CITY RESERVES THE RIGHT AT ANY POINT TO REQUIRE THE CONSTRUCTION OF THE REMEDIAL MEASURES SHOULD THERE BE ANY ISSUES WITH REDUCED CAPACITY, SEDIMENTATION, EROSION, PONDING, FLOODING OR OTHER ITEMS IDENTIFIED BY THE CITY ENGINEER.

12. NO COTCO SHALL BE ISSUED UNTIL THERE IS AN APPROVED POND CERTIFICATION AND INITIAL ACCEPTANCE FOR ANY NEEDED CONVEYANCE.

13. THE MAJOR FLOOD WILL BE PROVIDED AT A MINIMUM FROM EACH EMERGENCY OVERFLOW SCENARIO IDENTIFIED FROM THE 100 YEAR EMERGENCY OVERFLOW WATER SURFACE ELEVATION AND THE FINISHED FLOOR ELEVATION/TOP OF FOUNDATION OF ANY NEARBY STRUCTURE.

14. EMERGENCY INGRESS AND EGRESS - RIGHT-OF-WAY FOR INGRESS AND EGRESS FOR SERVICE AND EMERGENCY VEHICLES AND PERSONNEL IS GRANTED OVER, ACROSS, ON AND THROUGH ANY AND ALL PRIVATE ROADS AND WAYS, NOW OR HEREAFTER ESTABLISHED ON THE ASPEN 3-65 15-14 SOUTH OIL & GAS WELL SITE.

15. CRESTONE PEAK RESOURCES OPERATING LLC SHALL BE RESPONSIBLE TO FIX EROSION DOWNSTREAM OF SWALE RIP-RAP OUTLETS CAUSED BY THE DRAINAGE ON THE SITE.

**ASPEN 3-65 15-14 SOUTH**  
PRELIMINARY DRAINAGE PLAN  
CRESTONE PEAK RESOURCES OPERATING LLC  
W 1/2 SW 1/4 SECTION 15, T35, R65W, 6TH P.M.  
CITY OF AURORA, ADAMS COUNTY, COLORADO

[illegible]

RESPONSIBLE ENGINEER:

COVER SHEET

SCALE: AS NOTED
DRAWN BY: C.D.C.
DATE DRAWN: 06-21-2024
PROJ. NO: CRE03-21-0010
UELS FILE NO.:

**SHEET**

1

SURVEY BENCHMARK
COA ID: 35609SE003
DESCRIPTION: SET 3" DIAM. BRASS CAP (STAMPED COA BM, AB-120A, 25-N010A, 1981) ATOP 30" LONG STEEL PIPE IN CONCRETE, AT NW COR. OF E. 56TH AVE. AND MONAGHAN ROAD. MON. IS 11.5' +/- NORTH AND 105.5' +/- WEST OF SECT. COR. 9, 10, 16, 15, T3S, R6SW. BM IS 37' +/- N. OF N. EDGE OIL E. 56TH AVE. AKA 25-N010A
LATITUDE: 39° 47' 53.31" N
LONGITUDE: 104° 39' 34.51" W (NAD 83)
ELEV: 5466.23 (NAVD 88)

**Approved For One Year From This Date**

AURORA WATER - DRAINAGE DIVISION

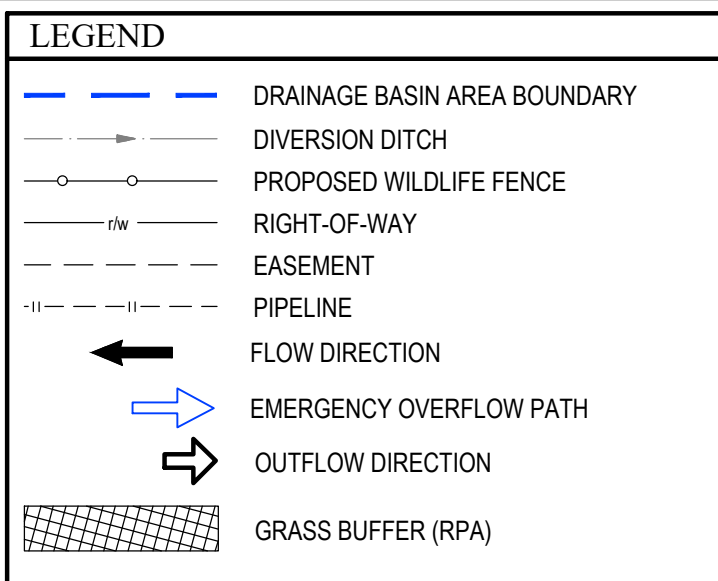
DATE \_\_\_\_\_





OWNER:  
PROPERTY RESERVE INC C/O LDS TAX DIVISION  
EDN:  
NONE FOUND

**3.63 CERTIFICATION OF DETENTION POND NOTE:**  
THE DEVELOPER SHALL HAVE A LICENSED PROFESSIONAL ENGINEER CERTIFY EACH STORMWATER DETENTION POND AND/OR WATER QUALITY BMP IS BUILT ACCORDING TO THE APPROVED PLANS AND SPECIFICATIONS AND THE REQUIRED DETENTION VOLUME, INCLUDING THE WQCV WHEN USED. IS, MET. THE CERTIFICATION SHALL ALSO VERIFY ALL PERTINENT DIMENSIONS, ELEVATIONS, REQUIRED OUTLET ORIFICE PLATES FOR DETENTION AND WQCV AND OTHER PERMANENT BMPs REQUIREMENTS ARE INSTALLED PER THE APPROVED PLANS AND SPECIFICATIONS, AND SHALL SHOW THE AS-BUILT DESIGN VOLUMES (WQCV, 10-YEAR, 100-YEAR, EUV) AND OTHER PERTINENT DIMENSIONS, ELEVATIONS AND CAPACITY REQUIREMENTS ASSOCIATED WITH THE WQ BMP USED. THE CERTIFICATION SHALL BE PROVIDED TO THE CITY OF AURORA ENGINEERING CONTROL SECTION PRINCIPAL ENGINEER, AN APPROVED POND CERTIFICATE SHALL BE REQUIRED FOR ALL SITES THAT REQUIRE A POND CERTIFICATE (AS WELL AS SATISFYING OTHER CONDITIONS OF THE STORMWATER PERMIT) FOR SITES THAT DO NOT REQUIRE A CERTIFICATE OF OCCUPANCY. EXAMPLES OF THESE SITES INCLUDE BUT ARE NOT LIMITED TO: SITES WITHOUT VERTICAL CONSTRUCTION, OIL AND GAS WELL PADS, OUTDOOR STORAGE, AND TOW YARDS. AN APPROVED POND CERTIFICATE SHALL BE REQUIRED PRIOR TO COMMENCEMENT OF BUSINESS OPERATIONS, IN NO CASE SHALL A CERTIFICATE OF OCCUPANCY OR TEMPORARY CERTIFICATE OF OCCUPANCY BE ISSUED WITHOUT AN APPROVED POND CERTIFICATE.

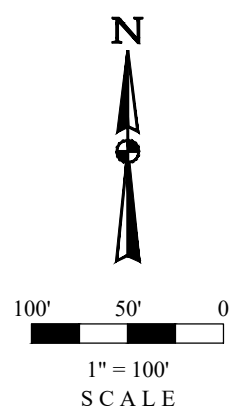


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- 24
- 25 9. REFERENCE SECTION B OF THE DRAINAGE REPORT FOR A DISCUSSION OF THE SITE IN RELATION TO THE NEAREST FLOODPLAIN.
- 26
- 27 10. THE PRIVATE SWALES SHALL BE MAINTAINED BY CRESTONE PEAK RESOURCES OPERATING LLC, AND SLOPES LESS THAN 2% PERMITTED, PROVIDED A
- 28 MINIMUM 0.5% SLOPE IS MAINTAINED ON ALL SWALES. AND UNDERPANS ARE PROVIDED IN THE SWALES WITH SLOPES THAT ARE LESS THAN 2%. REVISIONS
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- 34
- 35 12. ONE FOOT OF FREEBOARD WILL BE PROVIDED AT A MINIMUM FROM EACH EMERGENCY OVERFLOW SCENARIO IDENTIFIED FROM THE 100 YR
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- 41
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- 43 DRAINAGE ON THE SITE.

DESIGN POINT SUMMARY TABLE				
DESIGN POINT	TRIBUTARY BASIN	INLET TYPE	2-YR PEAK FLOW (cfs)	100-YR PEAK FLOW (cfs)
1'	A'	CULVERT	1.03	6.40
2'	B'	BASIN	2.60	14.88
3'		SWALE	0.21	2.61
4'	A'+B'+C+D'	OUTLET STRUCTURE	4.21	23.49
5'	A'+B'+C+D'	EMERG. SPILLWAY	4.21	23.49
6'	A'+B'+C+D'	TOTAL OUTFALL	4.21	10.10*
7'	OS1' + OS2'	CULVERT	0.68	10.20
8'	OS2'	SWALE	0.10	5.33
9'	OS3'	SWALE	0.31	14.94
10'	OS4'	RPA	0.44	1.63

CONVEYANCE HYDRAULIC TABLE			
CONVEYANCE	Q100 DESIGN FLOW (cfs)	FLOW DEPTH AT DESIGN FLOW (ft)	AVAILABLE FREEBOARD (ft)
ONSITE DITCH 1 (PROD PHASE)	6.40	0.65	1.35
ONSITE DITCH 2 (PROD PHASE)	2.61	0.34	1.66
OFFSITE DITCH 1 (PROD PHASE)	5.33	0.46	1.54
OFFSITE DITCH 2 (PROD PHASE)	14.94	0.96	1.04

COA ID: 336509SE003  
DESCRIPTION: SET 3" DIAM. BRASS CAP (STAMPED COA BM, AB-120A, 25-N010A, 1981) ATOP 30" LONG STEEL PIPE IN CONCRETE, AT NW COR. OF E. 56TH AVE. AND MONAGHAN ROAD. MON. IS 11.5' +/- NORTH AND 105.5' +/- WEST OF SEC. COR. 9.10,16,15, T3S, R65W. BM IS 37' +/- N. OF E. EDGE OIL E. 56TH AVE. AKA 25-N010A  
LATITUDE: 39° 47' 53.31" N  
LONGITUDE: 104° 39' 34.51" W (NAD 83)  
ELEV: 5466.23' (NAVD 88)



RESPONSIBLE ENGINEER:

# PRODUCTION OPERATIONS OFF-SITE DRAINAGE PLAN FINAL CONDITION

SCALE: AS NOTED  
DRAWN BY: C.D.C.  
DATE DRAWN: 06-2  
PROJ. NO: CRE03-21  
UELS FILE NO.:

**SHEET**



**SHEET 4**

**SHEET 5**

**SHEET 6**

**SHEET 7**

OWNER: PROPERTY RESERVE INC C/O LDS TAX DIVISION  
EDN: NONE FOUND

OWNER: PROPERTY RESERVE INC C/O LDS TAX DIVISION  
EDN: NONE FOUND

LOCAL 45 MPH

60W ROW, County Commissioner Bk 5, Pg 455

10W US West Easement, Rec No 199201052778

50W Pipeline Easement, EDN 218029

72W Future ROW, Aurora NEATS

HP 5508.0'

Well (Typ.)

ASPHEN 3-65 15-14-13 3BH  
ASPHEN 3-65 15-14-13 4AH  
ASPHEN 3-65 15-14-13 4BH  
QUICKSILVER 3-65 16-17-18-13 2BH  
QUICKSILVER 3-65 16-17-18-13 3AH  
QUICKSILVER 3-65 16-17-18-13 3BH  
QUICKSILVER 3-65 16-17-18-13 4AH  
QUICKSILVER 3-65 16-17-18-13 4BH

TOPSOIL STOCKPILE  
150W x 300L x 10H  
(12,000 CY)

ON-SITE DITCH-2  
L - 1.125 FT  
DEPTH - 24" MIN.  
2' FLAT BOTTOM  
4:1 SIDE SLOPES  
SLOPE: MIN 0.5% UNLINED

OFF-SITE DITCH-2  
L - 1.125 FT  
DEPTH - 24" MIN.  
2' FLAT BOTTOM  
4:1 SIDE SLOPES  
SLOPE: MIN 0.5% UNLINED

ON-SITE DITCH-1  
L - 491 FT  
DEPTH - 24" MIN.  
2' FLAT BOTTOM  
4:1 SIDE SLOPES  
SLOPE: MIN 0.5% UNLINED

OFF-SITE DITCH-1  
L - 636 FT  
DEPTH - 24" MIN.  
2' FLAT BOTTOM  
4:1 SIDE SLOPES  
SLOPE: MIN 0.5% UNLINED

XSEC A  
Slope: 0.5%  
100-Yr Flow: 6.40 cfs  
Depth: 0.63'

XSEC B  
Slope: 1.2%  
100-Yr Flow: 2.61 cfs  
Depth: 0.32'

XSEC C  
Slope: 1.5%  
100-Yr Flow: 5.33 cfs  
Depth: 0.46'

XSEC D  
Slope: 0.5%  
100-Yr Flow: 14.94 cfs  
Depth: 0.93'

100-Yr WSE

4H Wildlife Fence

8H Privacy Fence

50W Pipeline Easement

72W Future ROW

HP 5508.0'

Well (Typ.)

ASPHEN 3-65 15-14-13 3BH  
ASPHEN 3-65 15-14-13 4AH  
ASPHEN 3-65 15-14-13 4BH  
QUICKSILVER 3-65 16-17-18-13 2BH  
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QUICKSILVER 3-65 16-17-18-13 4BH

TOPSOIL STOCKPILE  
150W x 300L x 10H  
(12,000 CY)

ON-SITE DITCH-2  
L - 436 FT  
DEPTH - 24" MIN.  
2' FLAT BOTTOM  
4:1 SIDE SLOPES  
SLOPE: MIN 0.5% UNLINED

OFF-SITE DITCH-2  
L - 1.125 FT  
DEPTH - 24" MIN.  
2' FLAT BOTTOM  
4:1 SIDE SLOPES  
SLOPE: MIN 0.5% UNLINED

ON-SITE DITCH-1  
L - 491 FT  
DEPTH - 24" MIN.  
2' FLAT BOTTOM  
4:1 SIDE SLOPES  
SLOPE: MIN 0.5% UNLINED

OFF-SITE DITCH-1  
L - 636 FT  
DEPTH - 24" MIN.  
2' FLAT BOTTOM  
4:1 SIDE SLOPES  
SLOPE: MIN 0.5% UNLINED

XSEC A  
Slope: 0.5%  
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Slope: 1.2%  
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Depth: 0.32'

XSEC C  
Slope: 1.5%  
100-Yr Flow: 5.33 cfs  
Depth: 0.46'

XSEC D  
Slope: 0.5%  
100-Yr Flow: 14.94 cfs  
Depth: 0.93'

100-Yr WSE

4H Wildlife Fence

8H Privacy Fence

50W Pipeline Easement

72W Future ROW

HP 5508.0'

Well (Typ.)

ASPHEN 3-65 15-14-13 3BH  
ASPHEN 3-65 15-14-13 4AH  
ASPHEN 3-65 15-14-13 4BH  
QUICKSILVER 3-65 16-17-18-13 2BH  
QUICKSILVER 3-65 16-17-18-13 3AH  
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QUICKSILVER 3-65 16-17-18-13 4BH

TOPSOIL STOCKPILE  
150W x 300L x 10H  
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ON-SITE DITCH-2  
L - 436 FT  
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2' FLAT BOTTOM  
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L - 1.125 FT  
DEPTH - 24" MIN.  
2' FLAT BOTTOM  
4:1 SIDE SLOPES  
SLOPE: MIN 0.5% UNLINED

ON-SITE DITCH-1  
L - 491 FT  
DEPTH - 24" MIN.  
2' FLAT BOTTOM  
4:1 SIDE SLOPES  
SLOPE: MIN 0.5% UNLINED

OFF-SITE DITCH-1  
L - 636 FT  
DEPTH - 24" MIN.  
2' FLAT BOTTOM  
4:1 SIDE SLOPES  
SLOPE: MIN 0.5% UNLINED

XSEC A  
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100-Yr WSE

4H Wildlife Fence

8H Privacy Fence

50W Pipeline Easement

72W Future ROW

HP 5508.0'

Well (Typ.)

ASPHEN 3-65 15-14-13 3BH  
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L - 1.125 FT  
DEPTH - 24" MIN.

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8. ALL STORM INFRASTRUCTURE IS SIZED FOR THE 100-YR EVENT AND WILL BE PRIVATELY MAINTAINED BY CRESTONE PEAK RESOURCES OPERATING LLC.
9. REFERENCE SECTION B OF THE DRAINAGE REPORT FOR A DISCUSSION OF THE SITE IN RELATION TO THE NEAREST FLOODPLAIN.
10. THE PRIVATE SWALES SHALL BE MAINTAINED BY CRESTONE PEAK RESOURCES OPERATING LLC, AND SLOPE LESS THAN 2% PERMITTED, PROVIDED A MINIMUM 0.5% SLOPE PROVIDED IN ALL SWALES, AND UNDERDRAINS ARE REQUIRED IN THE SWALES WITH A 1% SLOPE. OTHERWISE, REVISIONS SHALL BE SUBMITTED FOR SWALE/CHANNEL SECTIONS THAT MEET ALL COA CRITERIA FOR PERMANENT INFRASTRUCTURE. IN ADDITION, THE CITY RESERVES THE RIGHT AT ANY POINT TO REQUIRE THE CONSTRUCTION OF THE REMEDIAL MEASURES SHOULD THERE BE ANY ISSUES WITH REDUCED CAPACITY, SEDIMENTATION, EROSION, PONDING, FLOODING OR OTHER ITEMS IDENTIFIED BY THE CITY ENGINEER.
11. NO COTOPD SHALL BE ISSUED UNTIL THERE IS AN APPROVED POND CERTIFICATION AND INITIAL ACCEPTANCE FOR ANY REQUIRED COVANCE.
12. ONE FOOT OF FREEBOARD WILL BE PROVIDED AT A MINIMUM FROM EACH EMERGENCY OVERFLOW SCENARIO IDENTIFIED FROM THE 100 YEAR EMERGENCY OVERFLOW WATER SURFACE ELEVATION AND THE FINISHED FLOOR ELEVATION/ TOP OF FOUNDATION OF ANY NEARBY STRUCTURE.
13. EMERGENCY INGRESS AND EGRESS - RIGHT-OF-WAY FOR INGRESS AND EGRESS FOR SERVICE AND EMERGENCY VEHICLES AND PERSONNEL IS GRANTED OVER, ACROSS, ON AND THROUGH ANY AND ALL PRIVATE ROADS AND WAYS, NOW OR HEREAFTER ESTABLISHED ON THE ASPEN 3-55 15-14 SOUTH OLD & GAS MILL SITE.
14. CRESTONE PEAK RESOURCES OPERATING LLC SHALL BE RESPONSIBLE TO FIX EROSION DOWNSTREAM OF SWALE RIP-RAP OUTLETS CAUSED BY THE DRAINAGE ON THE SITE.

DESIGN POINT SUMMARY TABLE				
DESIGN POINT	TRIBUTARY BASIN	INLET TYPE	2-YR PEAK FLOW (cfs)	100-YR PEAK FLOW (cfs)
1'	A'	CULVERT	1.03	6.40
2'	B'	BASIN	2.60	14.88
3'	C'	SWALE	0.21	2.61
4'	A+B+C+D'	OUTLET STRUCTURE	4.21	23.49
5'	A+B+C+D'	EMERG. SPILLWAY	4.21	23.49
6'	A+B+C+D'	TOTAL OUTFALL	4.21	10.10'
7'	OS1* OS2'	CULVERT	0.68	10.20
8'	OS2'	SWALE	0.10	5.33
9'	OS3'	SWALE	0.31	14.94
10'	OS4'	RPA	0.44	1.63

## SURVEY BENCHMARK

COA ID: 3S6509SE003

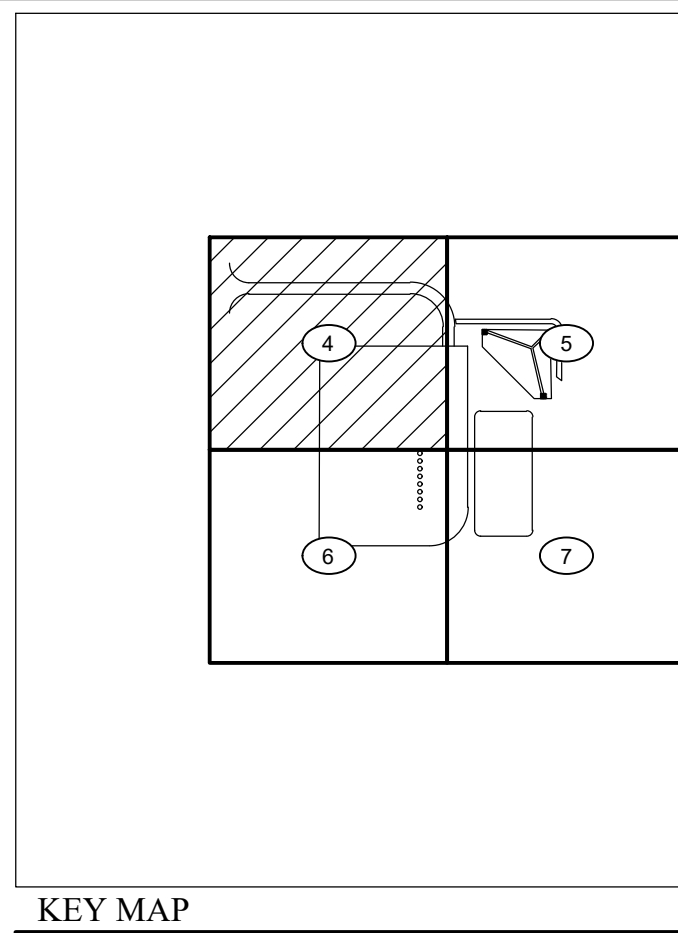
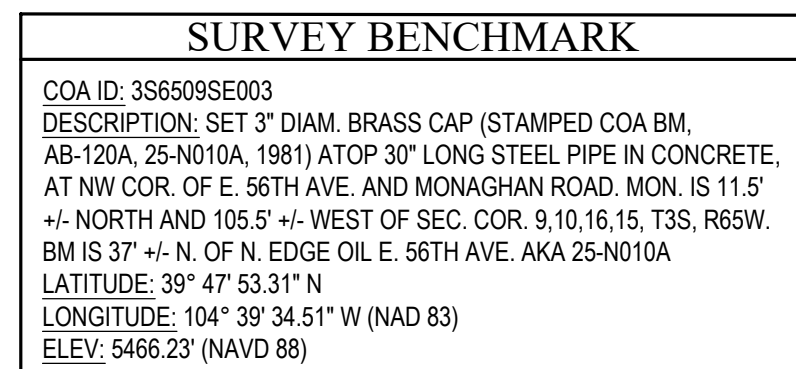
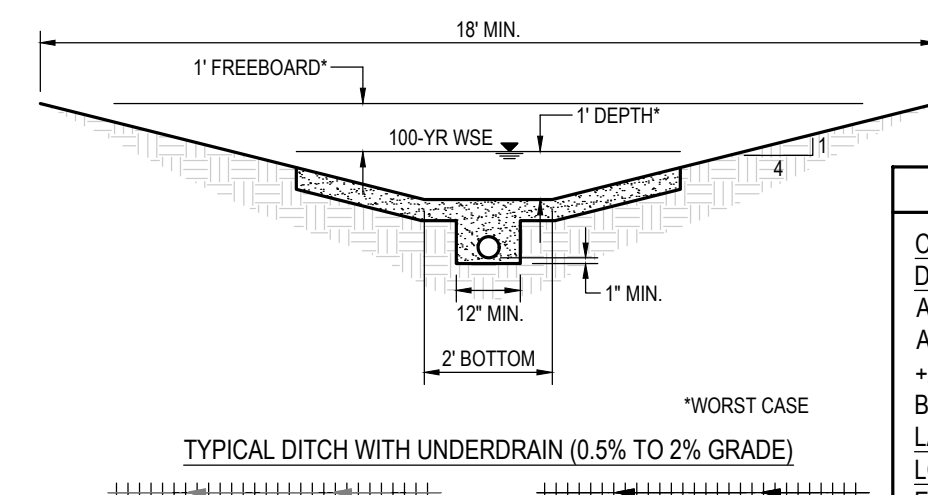
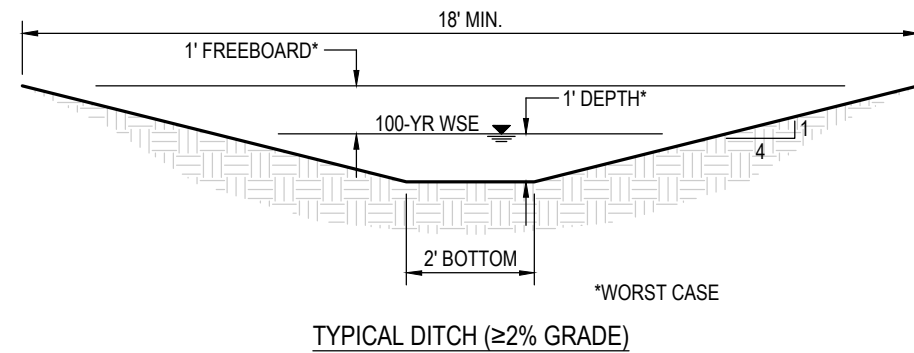
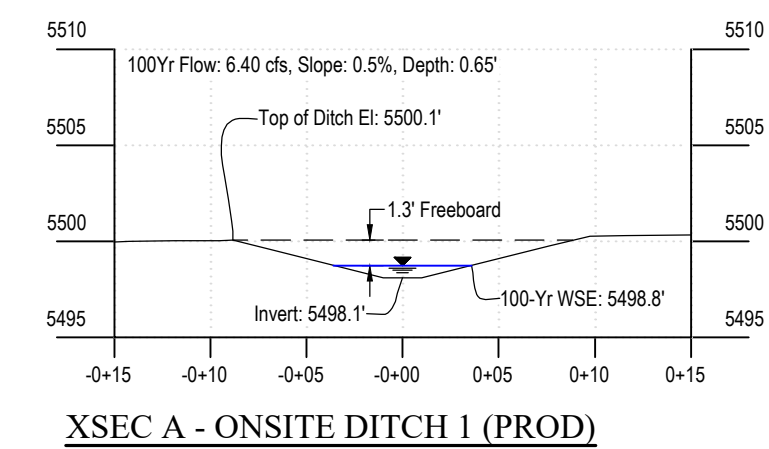
DESCRIPTION: SET 3" DIAM. BRASS CAP (STAMPED COA BM,  
12-120A, 25-N010A, 1981) ATOP 3" LONG STEEL PIPE IN CONCRETE,  
AT NW COR. OF E. 56TH AVE. AND MONAGHAN LAKE. MON. IS 11.5'  
+/- NORTH AND 105.5' +/- WEST OF SEC. COR. 9, 10, 16, 15, T3S, R65W.  
M IS 37' +/- N. OF N. EDGE OIL E. 56TH AVE. AKA 25-N010A

ALTITUDE: 39° 47' 53.31" N

LONGITUDE: 104° 39' 34.51" W (NAD 83)

LEV: 5466.23 (NAVD 88)





- | BASIN SUMMARY TABLE |                    |              |             |               |                         |                           |
|---------------------|--------------------|--------------|-------------|---------------|-------------------------|---------------------------|
| BASIN               | BASIN AREA<br>(Ac) | IMPERV.<br>% | 2-YR<br>(C) | 100-YR<br>(C) | 2-YR PEAK<br>FLOW (cfs) | 100-YR PEAK<br>FLOW (cfs) |
| A'                  | 2.40               | 41.8         | 0.31        | 0.65          | 1.03                    | 6.40                      |
| B'                  | 5.05               | 46.0         | 0.35        | 0.67          | 2.60                    | 14.88                     |
| C'                  | 1.98               | 20.0         | 0.14        | 0.57          | 2.21                    | 2.61                      |
| D'                  | 0.93               | 100.0        | 0.83        | 0.89          | 0.25                    | 6.53                      |
| OS-1'               | 3.06               | 27.0         | 0.19        | 0.59          | 0.64                    | 5.86                      |
| OS-2'               | 2.94               | 5.0          | 0.03        | 0.50          | 0.10                    | 5.33                      |
| OS-3'               | 12.82              | 5.3          | 0.03        | 0.51          | 0.31                    | 14.84                     |
| OS-4'               | 0.20               | 80.0         | 0.65        | 0.81          | 0.44                    | 1.63                      |

DESIGN POINT SUMMARY TABLE				
DESIGN POINT	TRIBUTARY BASIN	INLET TYPE	2-YR PEAK FLOW (cfs)	100-YR PEAK FLOW (cfs)
1'	A'	CULVERT	1.03	6.40
2'	B'	BASIN	2.60	14.88
3'	C'	SWALE	0.21	2.61
4'	A'+B'+C'+D'	OUTLET STRUCTURE	4.21	23.49
5'	A'+B'+C'+D'	EMERG. SPILLWAY	4.21	23.49
6'	A'+B'+C'+D'	TOTAL OUTFALL	10.10	10.10
7'	OS1' + OS2'	SWALE	0.68	10.20
8'	OS2'	SWALE	0.21	5.33
9'	OS3'	SWALE	0.31	14.94
10'	OS4'	RPA	0.44	1.63

CONVEYANCE HYDRAULIC TABLE			
CONVEYANCE	Q100 DESIGN FLOW (cfs)	DESIGN DEPTH AT FLOW (ft)	AVAILABLE FREEBOARD (ft)
ONSITE DITCH 1 (PROD PHASE)	6.40	0.65	1.35
ONSITE DITCH 2 (PROD PHASE)	2.61	0.34	1.66
OFFSITE DITCH 1 (PROD PHASE)	5.33	0.46	1.54
OFFSITE DITCH 2 (PROD PHASE)	14.94	0.96	1.04

**3.63 CERTIFICATION OF DETENTION POND NOTE:**

THE DEVELOPER SHALL HAVE A LICENSED PROFESSIONAL ENGINEER CERTIFY EACH STORMWATER DETENTION POND AND/OR WATER TREATMENT FACILITY SHALL BE DESIGNED TO MEET THE DESIGN SPECIFICATIONS AND THE REQUIRED DETENTION VOLUME, INCLUDING THE WQCV WHEN USED, IS MET. THE CERTIFICATION SHALL ALSO VERIFY ALL PERTINENT DIMENSIONS, ELEVATIONS, REQUIRED OUTLET ORIFICE PLATES FOR DETENTION AND WQCV AND OTHER PERMANENT BMPs REQUIREMENTS ARE INSTALLED PER THE APPROVED PLANS AND SPECIFICATIONS. THE CERTIFICATION SHALL INCLUDE THE DESIGN VOLUME (WQCV, 10-YEAR, 100-YEAR, ELEVATION) AND OTHER PERTINENT DIMENSIONS, ELEVATIONS AND CAPACITY REQUIREMENTS ASSOCIATED WITH THE WQV BMP USED. THE CERTIFICATION SHALL BE PROVIDED TO THE CITY OF AURORA ENGINEERING CONTROL SECTION PRINCIPAL ENGINEER AN APPROVED POND CERTIFICATE SHALL BE REQUIRED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OF THE DETENTION POND. OTHER CONDITIONS OF THE STORMWATER PERMIT) FOR SITES THAT DO NOT REQUIRE A CERTIFICATE OF OCCUPANCY. EXAMPLES OF THESE SITES INCLUDE BUT ARE NOT LIMITED TO: SITES WITHOUT VERTICAL CONSTRUCTION, LIQUID AND GAS PAVES; OUTDOOR STORAGE, AND TOW YARDS. APPROVED POND CERTIFICATE SHALL BE REQUIRED FOR ALL OTHER COMMERCIAL OR INDUSTRIAL OPERATIONS. THE DEVELOPER SHALL A CERTIFICATE OF OCCUPANCY OR TEMPORARY CERTIFICATE OF OCCUPANCY BE ISSUED WITHOUT AN APPROVED POND CERTIFICATE.

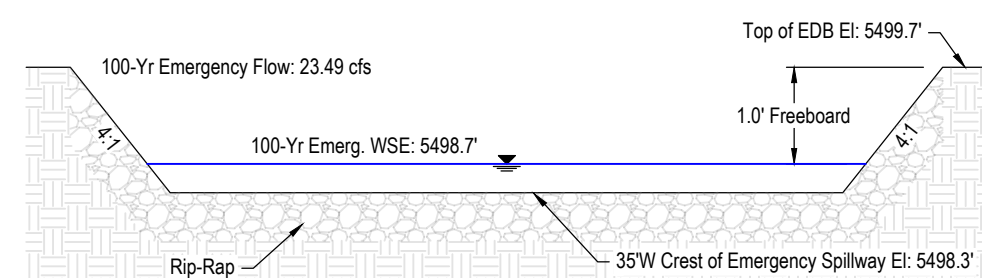
RESPONSIBLE ENGINEER:

PRODUCTION OPERATIONS  
ON-SITE DRAINAGE PLAN  
FINAL CONDITION

SCALE: AS NOTED
DRAWN BY: C.D.C.
DATE DRAWN: 06-21-2024
PROJ.NO: CRE03-21-0010
UELS FILE NO.:

**SHEET**





NOT FOR PRELIMINARY APPROVAL, BUT FOR INFORMATIONAL PURPOSES ONLY.

NOT FOR PRELIMINARY APPROVAL, BUT FOR INFORMATIONAL PURPOSES ONLY.

CL PATH

12' - 2' - 4'0" - 4'0" - 2'

4:1

Diagram illustrating the cross-section of a channel, labeled "WORST CASE". The channel is trapezoidal with a bottom width of 2' and a depth of 1'. The top width is 18' MIN. The channel is lined with riprap. The side slopes are 1 horizontal to 4 vertical (1/4). The channel is labeled "100-YR WSE" (100-year water surface elevation). The channel is labeled "1' FREEBOARD" and "1' DEPTH".

18' MIN.

1' FREEBOARD\*

100-YR WSE

1' DEPTH\*

1/4

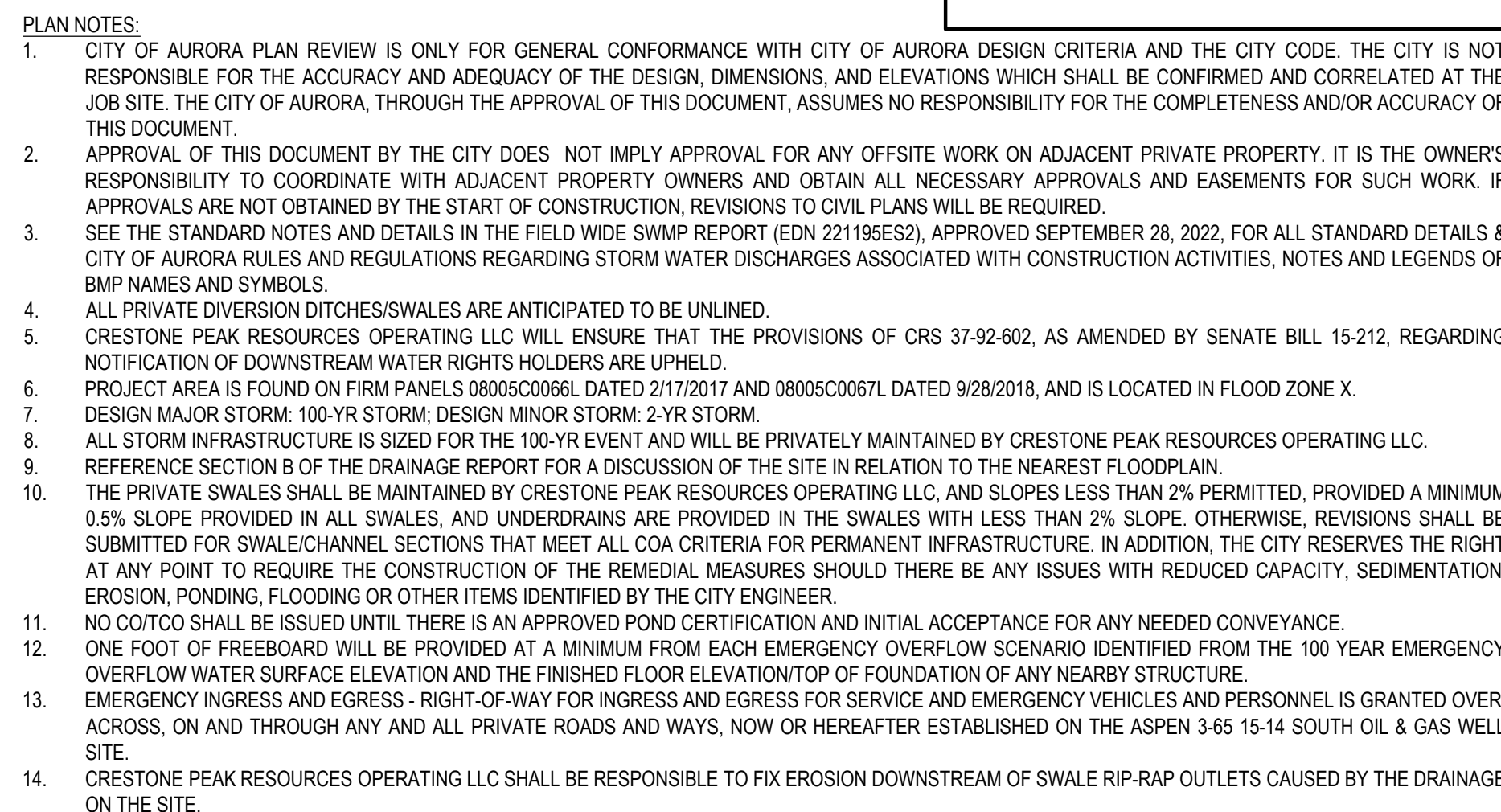
12' MIN.

2' BOTTOM

1' MIN.

WORST CASE

TYPICAL DITCH WITH UNDERDRAIN (0.5% TO 2% GRADE)



BASIN	BASIN AREA (Ac)	IMPERV. (%)	2-YR C-yr	100-YR C-yr	2-YR PEAK FLOW (cfs)	100-YR PEAK FLOW (cfs)
A'	2.40	41.8	0.31	0.65	1.03	6.40
B'	5.55	46.0	0.35	0.67	2.60	14.88
C'	1.08	20.0	0.14	0.57	0.21	2.61
D'	0.93	100.0	0.83	0.89	2.05	6.53
OS-1'	3.06	27.0	0.19	0.59	0.64	5.86
OS-2'	2.94	5.0	0.03	0.50	0.10	5.33
OS-3'	12.82	5.3	0.03	0.51	0.31	14.94
OS-4'	0.20	80.0	0.65	0.81	0.44	1.63

DESIGN POINT	TRIBUTARY BASIN	INLET TYPE	2-YR PEAK FLOW (cfs)	100-YR PEAK FLOW (cfs)
1'	A'	OUVERT	1.03	6.81
2'	B'	SWALE	2.60	16.28
3'	C'	SWALE	0.21	2.60
4'	A+B+C+D'	OUTLET STRUCTURE	4.21	23.49
5'	A+B+C+D'	EMERG. SPILLWAY	4.21	23.49
6'	A+B+C+D'	TOTAL OUTFALL	4.21	10.10*
7'	OS1 + OS2	OUVERT	0.88	10.20
8'	OS2	SWALE	0.10	0.10
9'	OS3	SWALE	0.31	14.94
10'	OS4	RPA	0.44	1.63

CONVEYANCE	Q100 DESIGN FLOW (cfs)	FLOW DEPTH AT DESIGN FLOW (ft)	AVAILABLE FREEBOARD (ft)
ONSITE DITCH 1 (PROD PHASE)	6.40	0.65	1.35
ONSITE DITCH 2 (PROD PHASE)	2.61	0.34	1.66
OFFSITE DITCH 1 (PROD PHASE)	5.33	0.46	1.54
OFFSITE DITCH 2 (PROD PHASE)	14.94	0.96	1.04

**3.63 CERTIFICATION OF DETENTION POND NOTE:**  
THE DEVELOPER SHALL HAVE A LICENSED PROFESSIONAL ENGINEER CERTIFY EACH STORMWATER DETENTION POND AND/OR WATER QUALITY BMP IS BUILT ACCORDING TO THE APPROVED PLANS AND MEETS THE DESIGN CRITERIA. THE CERTIFICATION SHALL VERIFY THE WOVY WHEN USED, IS MET THE CERTIFICATION SHALL ALSO VERIFY ALL PERTINENT DIMENSIONS, ELEVATIONS, REQUIRED OUTLET ORIFICE PLATES FOR DETENTION AND WOVY AND OTHER PERMANENT BMPs REQUIREMENTS ARE INSTALLED PER THE APPROVED PLANS AND SPECIFICATIONS, AND SHALL SHOW THE AS-BUILT DESIGN VOLUMES AND CAPACITY REQUIREMENTS ASSOCIATED WITH THE WOVY BMP USED. THE CERTIFICATION SHALL BE PROVIDED TO THE CITY OF AURORA ENGINEERING CONTROL SECTION PRINCIPAL ENGINEER. AN APPROVED POND CERTIFICATE SHALL BE REQUIRED PRIOR TO THE RETURN OF A FISCAL SECURE DEPOSIT (AS WELL AS SATISFYING OCCUPANCY NOTIFICATION FOR STORMWATER) FOR SITES THAT DO NOT REQUIRE A CERTIFICATE OF OCCUPANCY. EXAMPLES OF THESE SITES INCLUDE BUT ARE NOT LIMITED TO: SITES WITHOUT VERTICAL CONSTRUCTION, OIL AND GAS WELL PADS, OUTDOOR STORAGE, AND TOWN YARDS. AN APPROVED POND CERTIFICATE SHALL BE REQUIRED PRIOR TO THE RETURN OF A FISCAL SECURE DEPOSIT (AS WELL AS SATISFYING OCCUPANCY NOTIFICATION FOR STORMWATER) FOR SITES THAT DO NOT REQUIRE A CERTIFICATE OF OCCUPANCY OR TEMPORARY CERTIFICATE OF OCCUPANCY BE ISSUED WITHOUT AN APPROVED POND CERTIFICATE.

[illegible]

RESPONSIBLE ENGINEER

PRODUCTION OPERATIONS  
ON-SITE DRAINAGE PLAN  
FINAL CONDITION

SCALE: AS NOTED
DRAWN BY: C.D.C.
DATE DRAWN: 06-21-2024
PROJ. NO: CRE03-21-0010
UELS FILE NO.:

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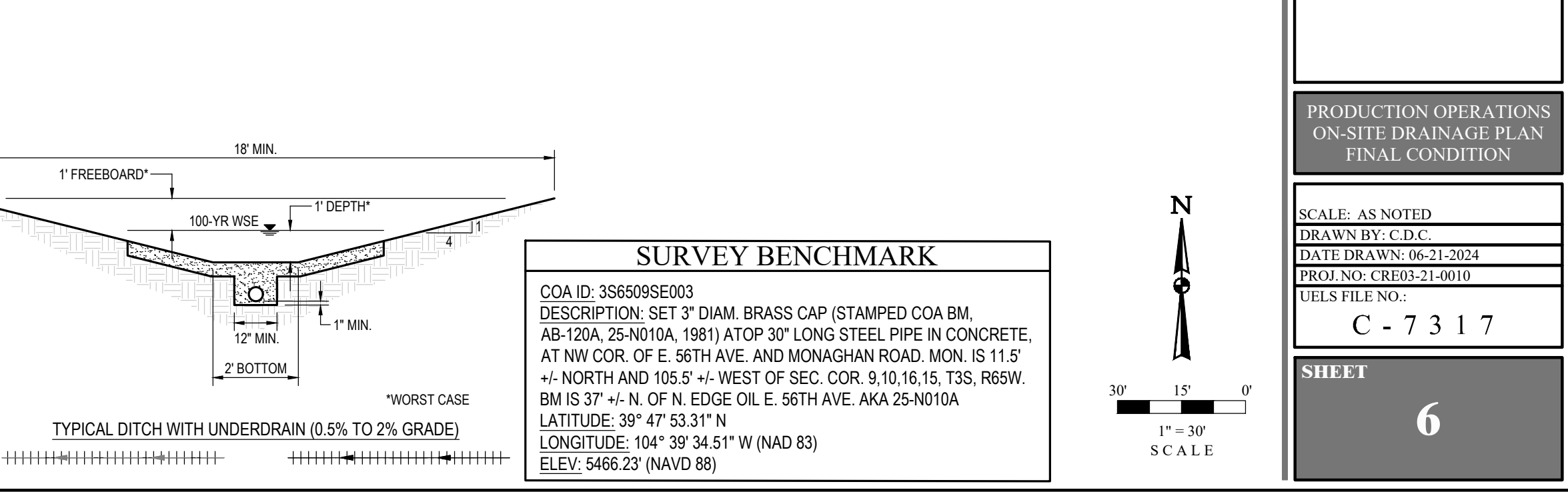
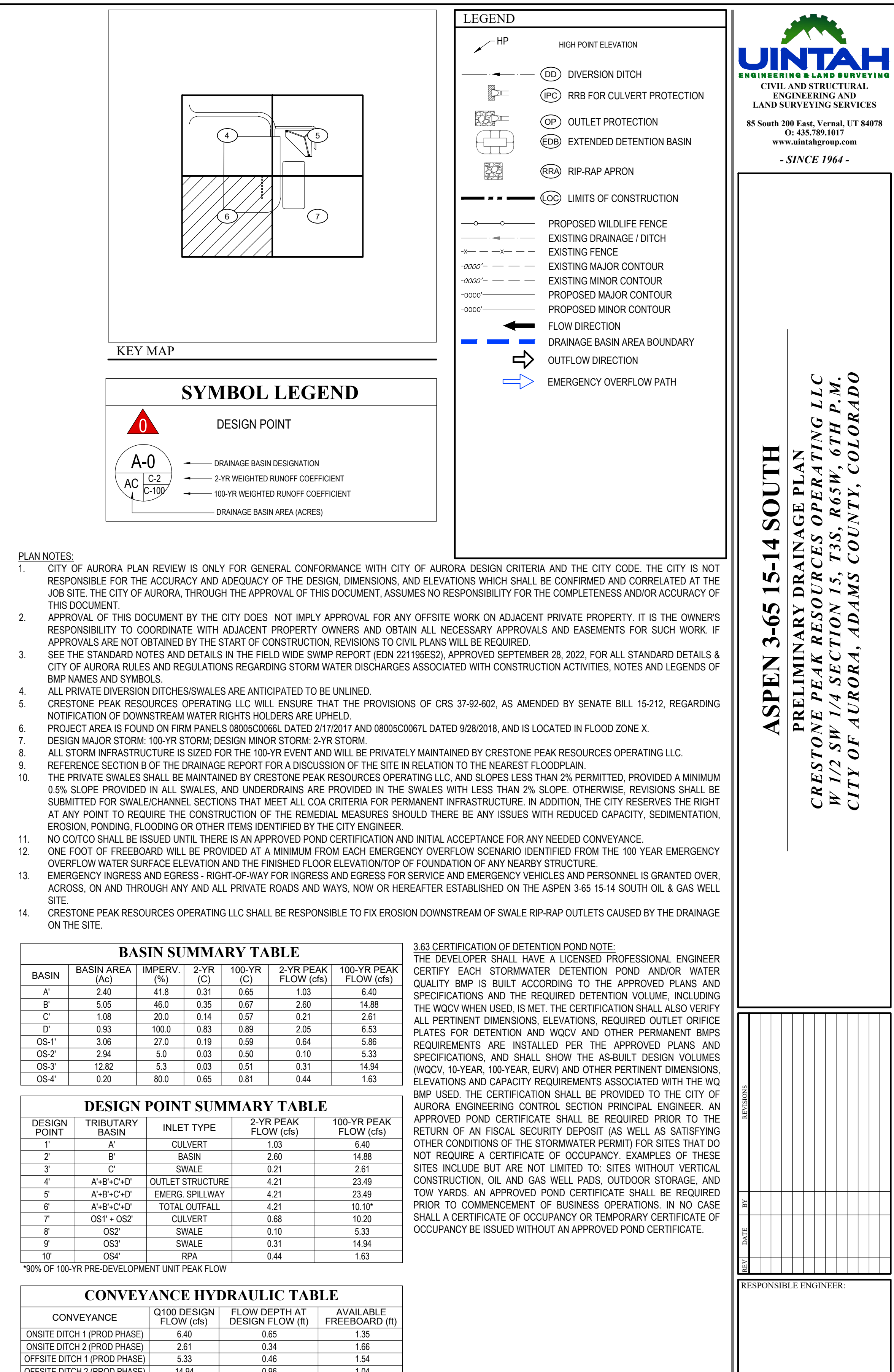
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- | BASIN | BASIN AREA<br>(Ac) | IMPERV.<br>(%) | 2-YR<br>(C) | 100-YR<br>(C) | 2-YR PEAK<br>FLOW (cfs) | 100-YR PEAK<br>FLOW (cfs) |
|-------|--------------------|----------------|-------------|---------------|-------------------------|---------------------------|
| A'    | 2.40               | 41.8           | 0.31        | 0.65          | 1.03                    | 6.40                      |
| B'    | 5.05               | 46.0           | 0.35        | 0.67          | 2.60                    | 14.88                     |
| C'    | 1.08               | 20.0           | 0.14        | 0.57          | 0.21                    | 2.61                      |
| D'    | 0.93               | 10.0           | 0.83        | 0.89          | 2.05                    | 6.56                      |
| OS-1' | 3.06               | 27.0           | 0.19        | 0.59          | 0.64                    | 5.83                      |
| OS-2' | 2.94               | 5.0            | 0.03        | 0.50          | 0.10                    | 5.33                      |
| OS-3' | 12.82              | 5.3            | 0.03        | 0.51          | 0.31                    | 14.94                     |
| OS-4' | 0.20               | 80.0           | 0.65        | 0.81          | 0.44                    | 1.83                      |

\*90% OF 100-YR PRE-DEVELOPMENT UNIT PEAK FLOW

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[illegible]

RESPONSIBLE ENGINEER:

# PRODUCTION OPERATIONS ON-SITE DRAINAGE PLAN FINAL CONDITION

SCALE: AS NOTED
DRAWN BY: C.D.C.
DATE DRAWN: 06-21-2024
PROJ. NO: CRE03-21-0010
UELS FILE NO.:

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