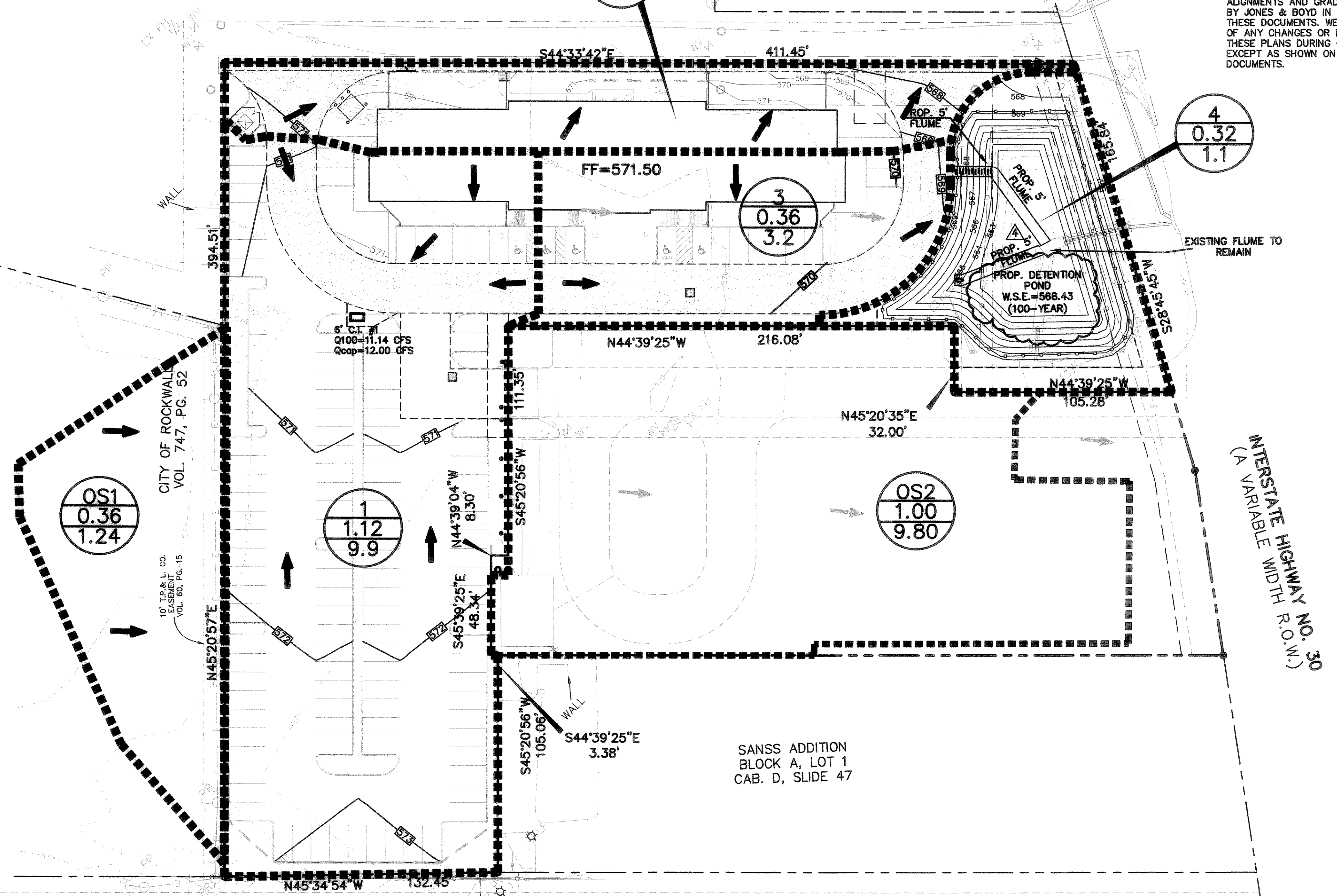


ROCKWALL CENTRAL SHOPPING CENTER
BLOCK A, LOT 2
CAB. B, SLIDE 231

BLOCK A, LOT 1
ALBRITTON ADDITION 26
CAB. B, SLIDE 233

"AS-BUILT" PLANS
NOTE: THE INTENT OF THE OWNER AND ENGINEER WAS TO CONSTRUCT THE IMPROVEMENTS ACCORDING TO THESE PLANS AS APPROVED BY THE CITY OF ROCKWALL. THE CONSTRUCTION OF ALIGNMENTS AND GRADES WERE VERIFIED BY JONES & BOYD IN ACCORDANCE TO THESE DOCUMENTS. WE ARE NOT AWARE OF ANY CHANGES OR REVISIONS TO THESE PLANS DURING CONSTRUCTION EXCEPT AS SHOWN ON THESE DOCUMENTS.

Contractor to field verify all existing underground utilities & report any discrepancies or conflicts to Engineer prior to any installation.



| Acreage Draining to detention pond | | | | | |
|------------------------------------|--------|-----------|---------|--------|-----------|
| AREA (ac) | 3.16 | Inflow | | Tc | 0.83 |
| 100-YEAR | | C | 10.00 | i(100) | 9.80 |
| Outflow | | Q(100 yr) | 7.11 | Q(100) | 25.70 |
| Proposed Intensities | | | | | |
| Time | Inflow | Outflow | Storage | Tc | Intensity |
| 5.00 | 7947 | 3200 | 4748 | 5 | 10.10 |
| 10.00 | 15422 | 4266 | 11156 | 10 | 9.80 |
| 15.00 | 21245 | 5333 | 15912 | 15 | 9.00 |
| 20.00 | 25808 | 6399 | 19409 | 20 | 8.20 |
| 30.00 | 32575 | 8532 | 24043 | 30 | 6.90 |
| 40.00 | 36509 | 10665 | 25844 | 40 | 5.80 |
| 50.00 | 39342 | 12798 | 26544 | 50 | 5.00 |
| 60.00 | 42489 | 14931 | 27558 | 60 | 4.50 |
| 70.00 | 44063 | 17064 | 26999 | 70 | 4.00 |
| 80.00 | 47840 | 19197 | 28643 | 80 | 3.80 |
| 90.00 | 49571 | 21330 | 28241 | 90 | 3.50 |
| 100.00 | 51931 | 23463 | 28468 | 100 | 3.30 |
| 110.00 | 50200 | 25596 | 24604 | 110 | 2.90 |
| 120.00 | 49099 | 27729 | 21370 | 120 | 2.60 |
| 130.00 | 51145 | 29862 | 21283 | 130 | 2.50 |
| 140.00 | 52876 | 31995 | 20881 | 140 | 2.40 |
| 150.00 | 51931 | 34128 | 17803 | 150 | 2.20 |

| Pond Volume Calculations | | | | | | |
|--------------------------|-------------------|--------------|--------------|-------------------|-----------------|---------------|
| Layer | Surface Area (sf) | Average Area | Layer Volume | Cumulative Volume | 100-year Volume | 100-year WSEL |
| 69.00 | 8472 | 7892 | 7892 | 33162 | | |
| 68.00 | 7311 | 6779 | 6779 | 25270 | 28643 | 68.43 |
| 67.00 | 6246 | 5758 | 5758 | 18492 | | |
| 66.00 | 5270 | 4824 | 4824 | 12734 | | |
| 65.00 | 4378 | 3972 | 3972 | 7910 | | |
| 64.00 | 3566 | 3220 | 3220 | 3938 | | |
| 63.00 | 2873 | 1437 | 718 | 718 | | |
| 62.50 | 0 | | | | | |

Pre-Developed Conditions:
Area Draining to Detention Pond = 3.51 A.C.
 $Q_{100} = 0.35 \times 8.30 \times 3.51 = 10.20$ C.F.S.

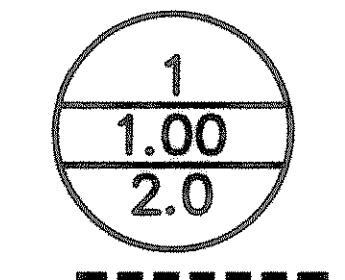
Developed Conditions:
Onsite Area Bypassing Pond = 0.35 A.C.
Area Draining to pond = 3.51 - 0.35 = 3.16 A.C.
Allowable Release From Pond = 10.2 - 3.09 = 7.11 C.F.S.

MAXIMUM VOLUME REQUIRED = 28,643 C.F.
DETENTION POND VOLUME PROVIDED 34,474 C.F.

| Designation | Area (Acres) | C | Tc (min) | I10 (in/hr) | Q100 (cfs) |
|-------------|--------------|------|----------|-------------|------------|
| 1 | 1.12 | 0.9 | 10 | 9.8 | 9.9 |
| 2 | 0.35 | 0.9 | 10 | 9.8 | 3.1 |
| 3 | 0.36 | 0.9 | 10 | 9.8 | 3.2 |
| 4 | 0.32 | 0.9 | 10 | 9.8 | 2.8 |
| OS1 | 0.36 | 0.35 | 10 | 9.8 | 1.2 |
| OS2 | 1.00 | 0.9 | 10 | 9.8 | 8.8 |

Drainage Design Theory
Rational Method

Q = C*I*A
Q ~ Flow in c.f.s.
I ~ Intensity (inches per hour)
A ~ Area (acres)
C ~ Coefficient of runoff
Tc ~ Time of concentration (minutes)



LEGEND

Proposed Drainage Area Designation
Proposed Drainage Area (AC.)
100 Year Runoff (c.f.s.)
Drainage Area Divide
Proposed Direction Of Flow

BENCHMARKS:

B.M. #1
SQUARE CUT ON TOP OF CURB ON THE SOUTH END OF A 15 FOOT CURB INLET APPROXIMATELY 77 FEET NORTHEAST OF THE SOUTH CORNER OF BLOCK A, LOT 2, NEWMAN CENTER NO. ONE. ELEV. = 565.46

B.M. #2
SQUARE CUT IN THE CENTER OF A 15 FOOT CURB INLET APPROXIMATELY 59 FEET NORTHWEST OF THE SOUTH CORNER OF BLOCK A, LOT 2, NEWMAN CENTER NO. ONE. ELEV. = 566.95

| NO. | REVISIONS DURING CONSTRUCTION | BY | DATE | NO. | REVISIONS DURING PLAN REVIEW | BY | DATE |
|-----|-------------------------------|----|------|-----|------------------------------|-----|---------|
| | | | | 3 | REVISED PER CITY COMMENTS | MPC | 8/02/06 |
| | | | | 2 | REVISED PER CITY COMMENTS | MPC | 7/31/06 |
| | | | | 1 | REVISED PER CITY COMMENTS | MPC | 7/10/06 |
| | | | | | | | |

The seal appearing on this document was authorized by Bilal A. Alzai, P.E. 92792 on 8/2/2007.

Alteration of a sealed document without proper notification to the responsible engineer is an offense under the Texas Engineering Practice Act.

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- Landscape Architecture
- Construction Management

DRAINAGE AREA MAP & DETENTION CAL.
BLOCK A, LOT 4
NEWMAN CENTER NO. ONE
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

PROJECT NO. QUA003
SHEET NO. C8