El Paso County
STORMWATER MANAGEMENT PLAN

Short Stop Restaurant

Part of Lot 1, Powers Centre Filing No. 3

Section 6, Township 14 South, Range 65 West of the 6th P.M.

5819 Palmer Park Boulevard

October 2, 2018

prepared for

Short Stop Restaurant

Oliver E. Watts, Consulting Engineer, Inc.
Colorado Springs, Colorado

OLIVER E. WATTS, PE-LS
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Celebrating over 39 years in business

October 2, 2018

El Paso County D.O.T.
2880 International Circle
suite 110
Colorado Springs, CO 80910

ATTN: Gilbert LaForce

SUBJECT: Stormwater Management Plan
Short Stop Restaurant

Transmitted herewith for your review and approval is the SWMP for the Short Stop Restaurant, located at 5819 Palmer Park Boulevard.

Please contact our office if we may provide any further information.

Oliver E. Watts, Consulting Engineer, Inc.

BY: _____
Erik S. Watts, Authorized Representative
Erosion Control Supervisor

The developer / owner has read and will comply with all of the requirements specified in this stormwater management report.

By: _____
Ted Vong
Short Stop Restaurant
485 N Circle Drive
Colorado Springs, CO 80909

Table of Contents

1. SITE DESCRIPTION:

The Short Stop Restaurant Site is located on the east side of Powers Boulevard just south of the Palmer Park, in the 'old K-Mart Shopping Center'. 5819 Palmer Park Boulevard: Section 6, Township 14 South, Range 65 West of the 6th P.M., in El Paso County. It is a portion of Lot 1, Powers Centre Filing No. 3.The overall Site totals 5.5 acres. Grading is also to occur on 0.067 acres of the existing, paved, parking lot.

a) Construction activity description: Construction activity will include; overlot grading, curb/ gutter installation, utility installation and building construction. The erosion control pond will be installed in the southwest portion of the site, during said overlot grading, to mitigate any runoff associated with overlot grading construction activities. The site will be landscaped once all construction has been completed.

b) Sequence / time line of activities: The site will be graded in compliance with El Paso County Code. Grading for the site is scheduled to be completed by December 2018. Total site disturbance will be 0.067 acres / 2951 square feet.

c) Site area: Lot 1 is 5.55 acres total. The portion of the site that is to experience grading is approximately 0.0.67 acres. The Site is not vegetated; it is an existing paved parking.

d) Runoff: Overall runoff from the Site will remain at historic levels. Attached is the "Description of Runoff" section from the sites drainage letter:

This Site was previously platted as Powers Center Filing no. 3. At that time a drainage report was submitted and approved by El Paso County, Colorado. The portion of the parking lot to be occupied by the restaurant is totally asphalt paved at this time. The construction of the drive in could arguably have less impervious cover that that of the existing parking, although for the sake of computations the impervious ratio is assumed to be 80% in keeping with the existing zoning. The entire lot area associated with the construction occupies 0.469 acre on an approximate slope of four percent. The runoff from the entire area is computed to be 2.0 cfs / 3.6 cfs, not including potential inflows from the north.

A sand filter basin is proposed to mitigate the placement of the restaurant, as required by County regulations. Based on the 2951 square foot footprint of the total disturbed area, the required storage is 90 cubic feet. The basin will be placed in an existing parking island in the southwest corner of the site, and is proposed be constructed of vertical masonry walls with the sand filter floor of 32 square feet, as shown in the enclosed computations. A curb outlet will route the runoff into the basin.

This parcel is not within the limits of a designated flood plain or flood hazard area, as identified on FEMA Panel No.'s 08041C0751 F 08041C0752 F, both dated March 17, 1997, a copy of which is enclosed for reference. The portions to be graded, are outside the flood plain, as shown on the drainage plan.

The method used for all computations is that specified in the City-County Drainage Criteria Manual, using the rational method for areas of the size of the site and the SCS method for the review of the major basin involved. All computations are enclosed for reference and review.

The local USDA/SCS office has mapped the soils in the area. A soils map interpretation sheet is enclosed for reference. All soils in this area are of hydrologic group "B", Blendon. It has moderate to high erosion hazards with both water and wind and is listed as having high potential for successful reseeding, especially with 'native' grasses. Potential erosion impacts would affect the parking lot and sediment pond. Silt fencing and/or hay bales will serve to mitigate this hazard.

e) Existing vegetation: As stated previously; Item 1, C "Site Area," the site is current a paved parking lot: The area is to be developed as listed in this report implemented.

f) Potential pollution sources: None are known to exist.

g) Non stormwater discharge: No springs are known to exist. Any additional discharge is confined to the surface and runoff routed to the aforementioned detention pond. As such, water flowing in Sand Creek will not be affected by this project.

h) Receiving water(s), size, type and description of outfall(s): Sand Creek and ultimately Fountain Creek is the receiving water for stormwater discharge from this Site. Outfalls are shown on the enclosed drainage plan.

Provide details

2. SITE MAP:
Enclosed are a vicinity map and drainage plan for review. Details for the BMP's are listed in the rear of this report.

3. BMPs FOR STORMWATER POLLUTION PREVENTION:

a) Erosion and sediment controls:

1) Structural practices: Erosion will be contained through the use of silt fencing, hay bale check dams and compacted soil berms.

2) Non-Structural practices: Permanent stabilization practices will be implemented on this Site through landscaping. See the approved landscape plan for details.

b) Materials handling and Spills Prevention: There are no plans to have any On-Site batch plant(s).

Vehicle refueling will take place away from areas containing or conveying water in accordance with State approved practices. Should a fuel or fluid spill occur, the contractor will County and State guidelines concerning spills such as; berming the area around the spill and remove all contaminated soil in an approved container and disposing of said containing at a County / State approved facility / Site.

4. FINAL STABILIZATION AND LONG TERM STORMWATER MANAGEMENT:
As stated earlier, copies of the drainage plan is submitted for your review. This Plan should adequately address this section. Our office will have inspectors monitoring the Site during construction to insure compliance with applicable State and El Paso County Code(s). The Permittee will contact your office upon final stabilization, once the silt fencing and/or hay bales have been removed and the vegetation / ground cover reaches 70% of pre-disturbance levels. See re-seed section, page 7, for specific final stabilization; landscape plan.

Landscape plan has not been included in SWMP as stated. Please provide.

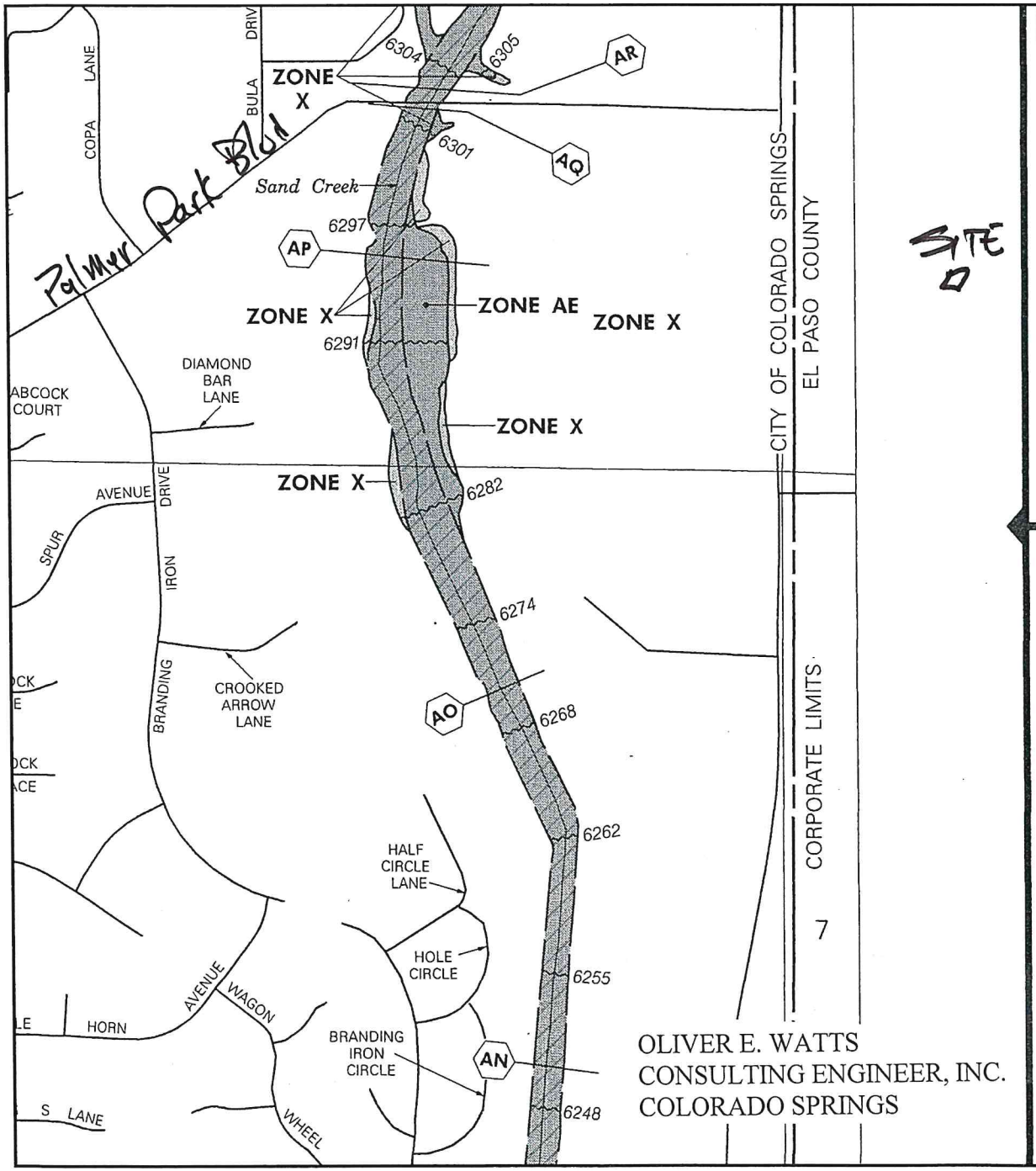
5. OTHER CONTROLS:
Please review the enclosed Grading and Erosion Control Plan. It details said controls. Waste disposal will be in accordance with El Paso County standards. The existing parking lot will serve as a rock mat to remove any soil from vehicles before entering Palmer Park Boulevard.

Provide Grading and Erosion Control Plan.

6. INSPECTION AND MAINTENANCE:
The owner, the architect, John Nelson, as well as this office will monitor the day to day Site activities during the construction. A copy of this report will be kept in the vehicle of said inspector. Inspections will occur and reports will be filled out every 14 days, and/or after a precipitation event as required, to ensure adequate operation and design of selected BMP's. Copies of said inspection reports will be kept in the site trailer and at this office. Silt fencing and/or hay bales will need to be replaced and/or repaired as need be. The sediment basin / pond will need to be inspection to insure the inlet and outlet structures have not been clogged or been damaged / collapsed. All liter and debris should be removed form the pond and disposed off of the site (i.e. in a trash bag, trash can, dumpster).

7. SWMP REVISION PROCEDURES:
This SWMP should be revised as necessary to address changing site conditions and BMP needs.
The need for revision could include the following: Stabilization, continued overlot grading, removal of one of more BMP as items are completed, the weather and precipitation could affect and cause a needed revision in the SWMP. This office will revise accordingly.

8. FINAL STABILIZATION:
Re-seed mixture
The area is current a paved parking area. No reseeding will be done. See the landscape plan for details



OLIVER E. WATTS
CONSULTING ENGINEER, INC.
COLORADO SPRINGS

APPROXIMATE SCALE IN FEET
500 0 500

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

EL PASO COUNTY, COLORADO AND INCORPORATED AREAS

PANEL 751 OF 1300
(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:

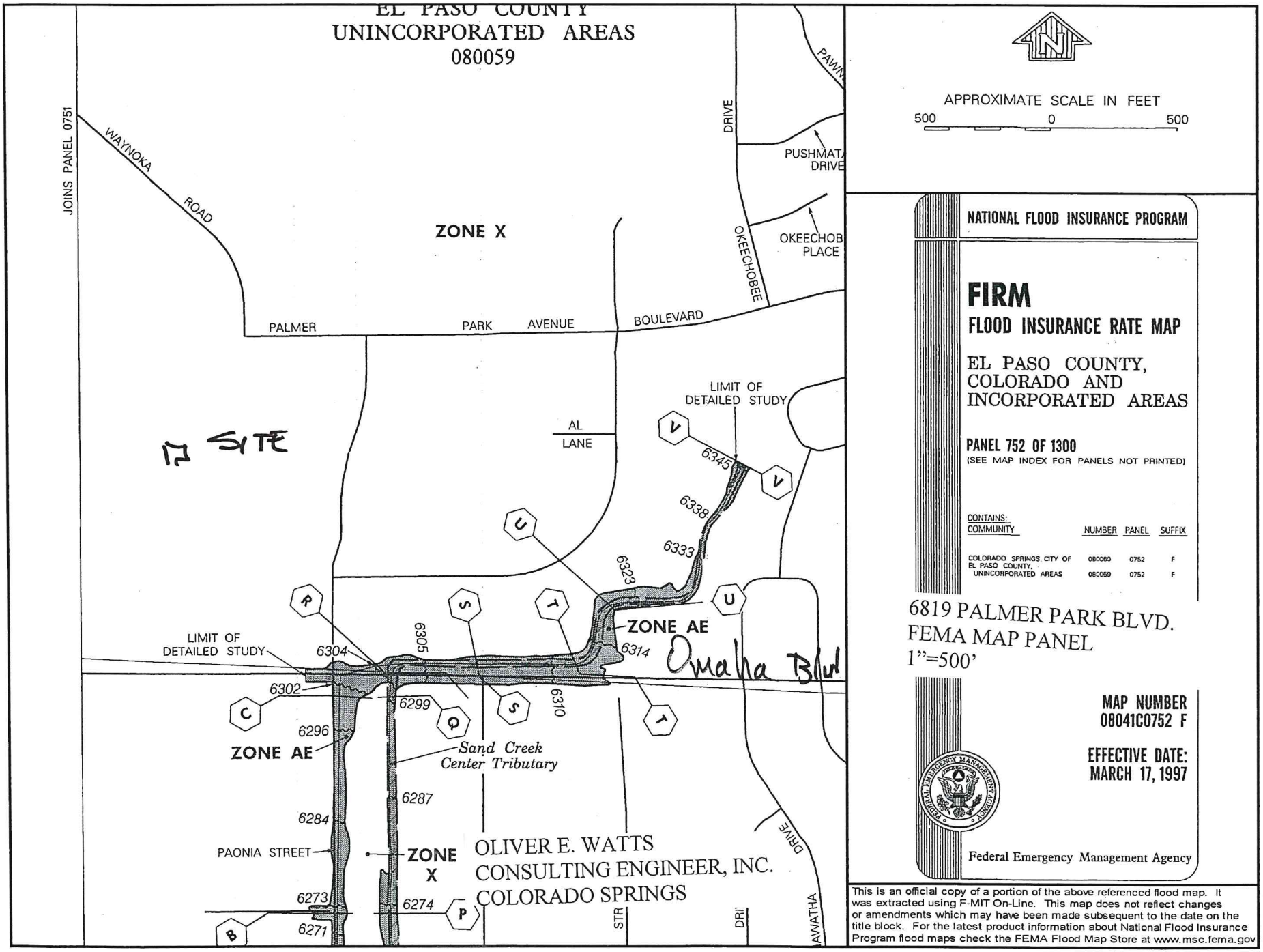
COMMUNITY	NUMBER	PANEL	SUFFIX
COLORADO SPRINGS, CITY OF	080060	0751	F
EL PASO COUNTY, UNINCORPORATED AREAS	080059	0751	F

6819 PALMER PARK BLVD.
FEMA MAP PANEL
1"=500'

MAP NUMBER
08041C0751 F

EFFECTIVE DATE:
MARCH 17, 1997

Federal Emergency Management Agency



SITE

Omaha Blvd

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

MAJOR BASIN	SUB BASIN	AREA		BASIN		T_c MIN	I		SOIL GRP	DEV. TYPE	C		FLOW		RETURN PERIOD	
		PLANIM READ	ACRES	LENGTH	HEIGHT								qp	qp		
EXISTING	A	COGO	0.469	100	4	3.3									5	100
				+20	V=4	+0.1										
						3.4	5.2	8.8	B	80%	0.81	0.88	2.0	3.6	5	100

HYDROLOGICAL COMPUTATION – BASIC DATA
PROJ: 5819 PALMER PARK BLVD. BY: O.E. WATTS
RATIONAL METHOD DATE: September 27, 2018

OLIVER E. WATTS, CONSULTING ENGINEER, INC.
614 ELKTON DRIVE COLORADO SPRINGS, CO 80907

STREET AND STORM SEWER CALCULATIONS

STREET	LOCATION	DISTANCE	ELEVATION & SLOPE	TOTAL RUNOFF	STREET FLOW / CAPACITY	PIPE FLOW	TYPE PIPE, CATCH BASIN & SLOPE %
PRIVATE	BASIN A		2.4%	2.0/3.6		2.0	4' CURB OUTLET
							SAND FILTER BASIN SEE ATTACHED

Design Procedure Form: Sand Filter (SF)

UD-BMP (Version 3.06, November 2016)

3/4

Designer:	O.E. Watts
Company:	OEW Cons. Engr. Inc
Date:	September 27, 2018
Project:	5819 Palmer Park
Location:	

1. Basin Storage Volume	
A) Effective Imperviousness of Tributary Area, I_a (100% if all paved and roofed areas upstream of sand filter)	I_a = 80.0 %
B) Tributary Area's Imperviousness Ratio (i = I_a/100)	i = 0.800
C) Water Quality Capture Volume (WQCV) Based on 12-hour Drain Time WQCV= 0.8 * (0.91* i^3 - 1.19 * i^2 + 0.78 * i)	WQCV = 0.26 watershed inches
D) Contributing Watershed Area (including sand filter area)	Area = 2,951 sq ft
E) Water Quality Capture Volume (WQCV) Design Volume V_{WQCV} = WQCV / 12 * Area	V_{WQCV} = 65 cu ft
F) For Watersheds Outside of the Denver Region, Depth of Average Runoff Producing Storm	d_6 = 0.60 in
G) For Watersheds Outside of the Denver Region, Water Quality Capture Volume (WQCV) Design Volume	$V_{WQCV\ OTHER}$ = 90 cu ft
H) User Input of Water Quality Capture Volume (WQCV) Design Volume (Only if a different WQCV Design Volume is desired)	$V_{WQCV\ USER}$ = cu ft
2. Basin Geometry	
A) WQCV Depth	D_{WQCV} = 1.0 ft
B) Sand Filter Side Slopes (Horizontal distance per unit vertical, 4:1 or flatter preferred). Use "0" if sand filter has vertical walls.	Z = 0.00 ft / ft
C) Minimum Filter Area (Flat Surface Area)	A_{Min} = 30 sq ft
D) Actual Filter Area	A_{Actual} = 32.02 sq ft
E) Volume Provided	V_T = cu ft
3. Filter Material	Choose One: (●) 18" CDOT Class B or C Filter Material ( ) Other (Explain):
4. Underdrain System	
A) Are underdrains provided?	Choose One: ( ) YES (●) NO
B) Underdrain system orifice diameter for 12 hour drain time	
i) Distance From Lowest Elevation of the Storage Volume to the Center of the Orifice	y = N/A ft
ii) Volume to Drain in 12 Hours	Vol_{12} = N/A cu ft
iii) Orifice Diameter, 3/8" Minimum	D_O = N/A in

Design Procedure Form: Sand Filter (SF)

4/4

Designer:	**O.E. Watts**
Company:	**OEW Cons. Engr. Inc**
Date:	**September 27, 2018**
Project:	**5819 Palmer Park**
Location:	

5. Impermeable Geomembrane Liner and Geotextile Separator Fabric A) Is an impermeable liner provided due to proximity of structures or groundwater contamination?	Choose One ○ YES ○ NO
6-7. Inlet / Outlet Works A) Describe the type of energy dissipation at inlet points and means of conveying flows in excess of the WQCV through the outlet	

Notes:

Table 6-6. Runoff Coefficients for Rational Method
(Source: UDFCD 2001)

Land Use or Surface Characteristics	Percent Impervious	Runoff Coefficients											
		2-year		5-year		10-year		25-year		50-year		100-year	
		HSG A&B	HSG C&D	HSG A&B	HSG C&D	HSG A&B	HSG C&D	HSG A&B	HSG C&D	HSG A&B	HSG C&D	HSG A&B	HSG C&D
Business													
Commercial Areas	95	0.79	0.80	0.81	0.82	0.83	0.84	0.85	0.87	0.87	0.88	0.88	0.89
Neighborhood Areas	70	0.45	0.49	0.49	0.53	0.53	0.57	0.58	0.62	0.60	0.65	0.62	0.68
Residential													
1/8 Acre or less	65	0.41	0.45	0.45	0.49	0.49	0.54	0.54	0.59	0.57	0.62	0.59	0.65
1/4 Acre	40	0.23	0.28	0.30	0.35	0.36	0.42	0.42	0.50	0.46	0.54	0.50	0.58
1/3 Acre	30	0.18	0.22	0.25	0.30	0.32	0.38	0.39	0.47	0.43	0.52	0.47	0.57
1/2 Acre	25	0.15	0.20	0.22	0.28	0.30	0.36	0.37	0.46	0.41	0.51	0.46	0.56
1 Acre	20	0.12	0.17	0.20	0.26	0.27	0.34	0.35	0.44	0.40	0.50	0.44	0.55
Industrial													
Light Areas	80	0.57	0.60	0.59	0.63	0.63	0.66	0.66	0.70	0.68	0.72	0.70	0.74
Heavy Areas	90	0.71	0.73	0.73	0.75	0.75	0.77	0.78	0.80	0.80	0.82	0.81	0.83
Parks and Cemeteries	7	0.05	0.09	0.12	0.19	0.20	0.29	0.30	0.40	0.34	0.46	0.39	0.52
Playgrounds	13	0.07	0.13	0.16	0.23	0.24	0.31	0.32	0.42	0.37	0.48	0.41	0.54
Railroad Yard Areas	40	0.23	0.28	0.30	0.35	0.36	0.42	0.42	0.50	0.46	0.54	0.50	0.58
Undeveloped Areas													
Historic Flow Analysis-- Greenbelts, Agriculture	2	0.03	0.05	0.09	0.16	0.17	0.26	0.26	0.38	0.31	0.45	0.36	0.51
Pasture/Meadow	0	0.02	0.04	0.08	0.15	0.15	0.25	0.25	0.37	0.30	0.44	0.35	0.50
Forest	0	0.02	0.04	0.08	0.15	0.15	0.25	0.25	0.37	0.30	0.44	0.35	0.50
Exposed Rock	100	0.89	0.89	0.90	0.90	0.92	0.92	0.94	0.94	0.95	0.95	0.96	0.96
Offsite Flow Analysis (when landuse is undefined)	45	0.26	0.31	0.32	0.37	0.38	0.44	0.44	0.51	0.48	0.55	0.51	0.59
Streets													
Paved	100	0.89	0.89	0.90	0.90	0.92	0.92	0.94	0.94	0.95	0.95	0.96	0.96
Gravel	80	0.57	0.60	0.59	0.63	0.63	0.66	0.66	0.70	0.68	0.72	0.70	0.74
Drive and Walks	100	0.89	0.89	0.90	0.90	0.92	0.92	0.94	0.94	0.95	0.95	0.96	0.96
Roofs	90	0.71	0.73	0.73	0.75	0.75	0.77	0.78	0.80	0.80	0.82	0.81	0.83
Lawns	0	0.02	0.04	0.08	0.15	0.15	0.25	0.25	0.37	0.30	0.44	0.35	0.50

3.2 Time of Concentration

One of the basic assumptions underlying the Rational Method is that runoff is a function of the average rainfall rate during the time required for water to flow from the hydraulically most remote part of the drainage area under consideration to the design point. However, in practice, the time of concentration can be an empirical value that results in reasonable and acceptable peak flow calculations.

For urban areas, the time of concentration (t_c) consists of an initial time or overland flow time (t_i) plus the travel time (t_t) in the storm sewer, paved gutter, roadside drainage ditch, or drainage channel. For non-urban areas, the time of concentration consists of an overland flow time (t_i) plus the time of travel in a concentrated form, such as a swale or drainageway. The travel portion (t_t) of the time of concentration can be estimated from the hydraulic properties of the storm sewer, gutter, swale, ditch, or drainageway. Initial time, on the other hand, will vary with surface slope, depression storage, surface cover, antecedent rainfall, and infiltration capacity of the soil, as well as distance of surface flow. The time of concentration is represented by Equation 6-7 for both urban and non-urban areas.

$$t_c = t_i + t_t \quad \text{(Eq. 6-7)}$$

Where:

t_c = time of concentration (min)

t_i = overland (initial) flow time (min)

t_t = travel time in the ditch, channel, gutter, storm sewer, etc. (min)

3.2.1 Overland (Initial) Flow Time

The overland flow time, t_i, may be calculated using Equation 6-8.

$$t_i = \frac{0.395(1.1 - C_5)\sqrt{L}}{S^{0.33}} \quad \text{(Eq. 6-8)}$$

Where:

t_i = overland (initial) flow time (min)
C_5 = runoff coefficient for 5-year frequency (see Table 6-6)
L = length of overland flow (300 ft maximum for non-urban land uses, 100 ft maximum for urban land uses)
S = average basin slope (ft/ft)

Note that in some urban watersheds, the overland flow time may be very small because flows quickly concentrate and channelize.

3.2.2 Travel Time

For catchments with overland and channelized flow, the time of concentration needs to be considered in combination with the travel time, t_t, which is calculated using the hydraulic properties of the swale, ditch, or channel. For preliminary work, the overland travel time, t_t, can be estimated with the help of Figure 6-25 or Equation 6-9 (Guo 1999).

$$V = C_v S_w^{0.5} \quad \text{(Eq. 6-9)}$$

Where:

V = velocity (ft/s)

C_v = conveyance coefficient (from Table 6-7)

S_w = watercourse slope (ft/ft)

Table 6-7. Conveyance Coefficient, C_v

Type of Land Surface	C_v
Heavy meadow	2.5
Tillage/field	5
Riprap (not buried)*	6.5
Short pasture and lawns	7
Nearly bare ground	10
Grassed waterway	15
Paved areas and shallow paved swales	20

* For buried riprap, select C_v value based on type of vegetative cover.

The travel time is calculated by dividing the flow distance (in feet) by the velocity calculated using Equation 6-9 and converting units to minutes.

The time of concentration (t_c) is then the sum of the overland flow time (t_i) and the travel time (t_t) per Equation 6-7.

3.2.3 First Design Point Time of Concentration in Urban Catchments

Using this procedure, the time of concentration at the first design point (typically the first inlet in the system) in an urbanized catchment should not exceed the time of concentration calculated using Equation 6-10. The first design point is defined as the point where runoff first enters the storm sewer system.

$$t_c = \frac{L}{180} + 10 \qquad \text{(Eq. 6-10)}$$

Where:

t_c = maximum time of concentration at the first design point in an urban watershed (min)

L = waterway length (ft)

Equation 6-10 was developed using the rainfall-runoff data collected in the Denver region and, in essence, represents regional "calibration" of the Rational Method. Normally, Equation 6-10 will result in a lesser time of concentration at the first design point and will govern in an urbanized watershed. For subsequent design points, the time of concentration is calculated by accumulating the travel times in downstream drainageway reaches.

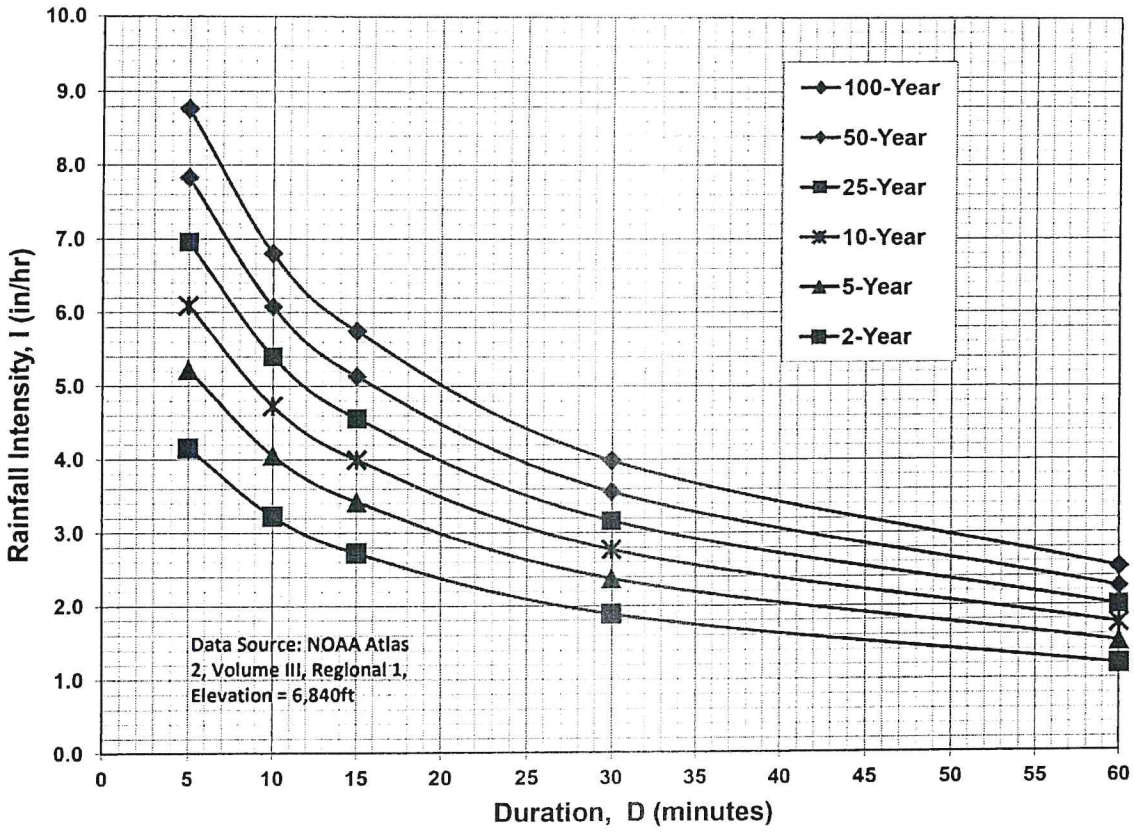
3.2.4 Minimum Time of Concentration

If the calculations result in a t_c of less than 10 minutes for undeveloped conditions, it is recommended that a minimum value of 10 minutes be used. The minimum t_c for urbanized areas is 5 minutes.

3.2.5 Post-Development Time of Concentration

As Equation 6-8 indicates, the time of concentration is a function of the 5-year runoff coefficient for a drainage basin. Typically, higher levels of imperviousness (higher 5-year runoff coefficients) correspond to shorter times of concentration, and lower levels of imperviousness correspond to longer times of

Figure 6-5. Colorado Springs Rainfall Intensity Duration Frequency



IDF Equations

$I_{100} = -2.52 \ln(D) + 12.735$

$I_{50} = -2.25 \ln(D) + 11.375$

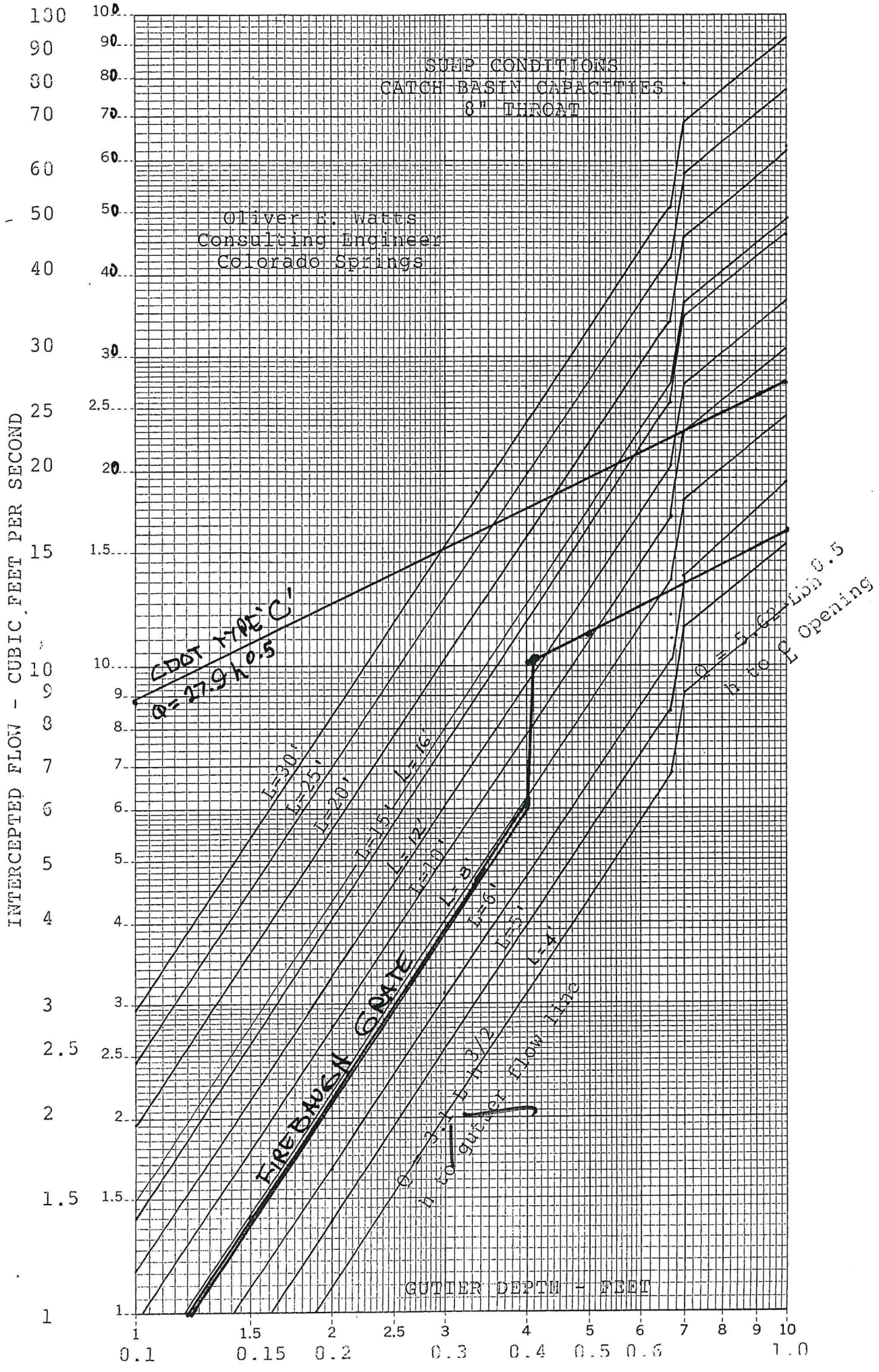
$I_{25} = -2.00 \ln(D) + 10.111$

$I_{10} = -1.75 \ln(D) + 8.847$

$I_{5} = -1.50 \ln(D) + 7.583$

$I_{2} = -1.19 \ln(D) + 6.035$

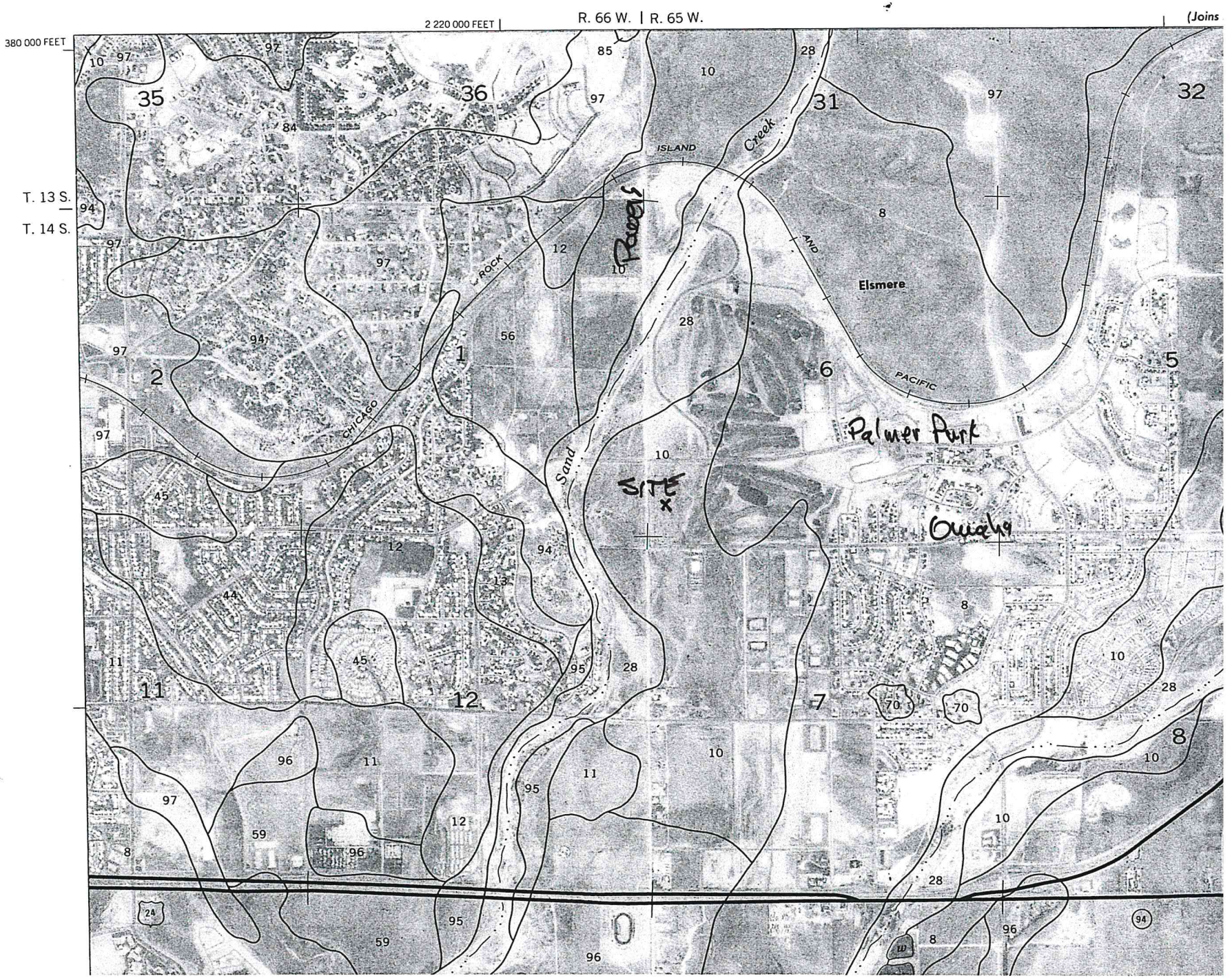
Note: Values calculated by equations may not precisely duplicate values read from figure.



46 7080

K&E LOGARITHMIC 2 X 1 CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE



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COLORADO SPRINGS

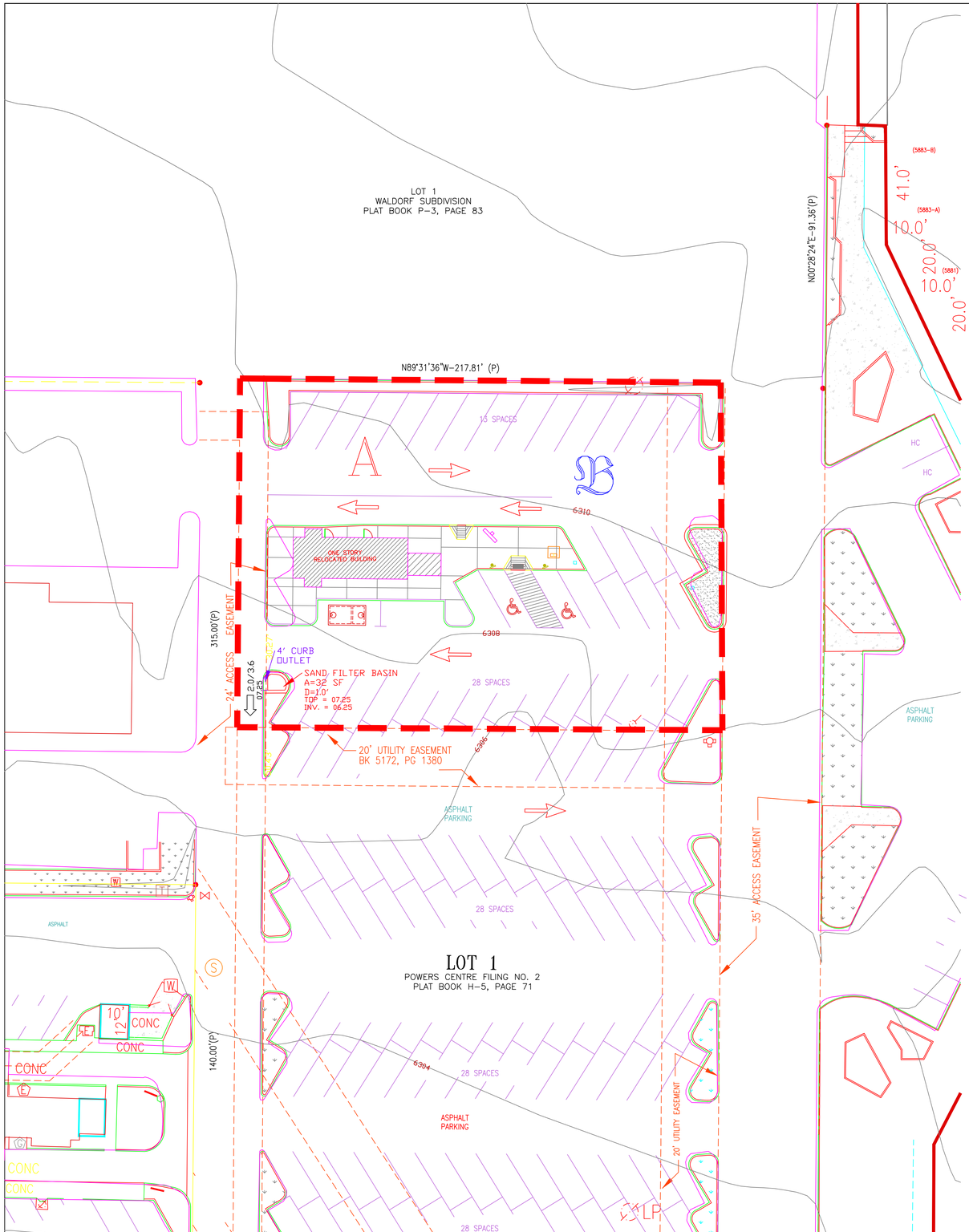
6819 PALMER PARK BLVD
SCS SOILS MAP
1"=2000'

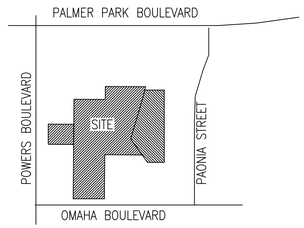
TABLE 16.--SOIL AND WATER FEATURES

[Absence of an entry indicates the feature is not a concern. See "flooding" in Glossary for definition of terms as "rare," "brief," and "very brief." The symbol > means greater than]

Soil name and map symbol	Hydrologic group	Flooding			Bedrock		Potential frost action
		Frequency	Duration	Months	Depth	Hardness	
					In		
Alamosa: 1	C	Frequent	Brief	May-Jun	>60	---	High.
Ascalon: 2, 3	B	None	---	---	>60	---	Moderate.
Badland: 4	D	---	---	---	---	---	---
Bijou: 5, 6, 7	B	None	---	---	>60	---	Low.
Blakeland: 8	A	None	---	---	>60	---	Low.
[1]9: Blakeland part	A	None	---	---	>60	---	Low.
Fluvaquentic Haplaquolls part	D	Common	Very brief	Mar-Aug	>60	---	High.
Blendon: 10	B	None	---	---	>60	---	Moderate.
Bresser: 11, 12, 13	B	None	---	---	>60	---	Low.
Brussett: 14, 15	B	None	---	---	>60	---	Moderate.
Chaseville: 16, 17	A	None	---	---	>60	---	Low.
[1]18: Chaseville part	A	None	---	---	>60	---	Low.
Midway part	D	None	---	---	10-20	Rippable	Moderate.
Columbine: 19	A	None to rare	---	---	>60	---	Low.
Connerton: [1]20: Connerton part	B	None	---	---	>60	---	High.
Rock outcrop part	D	---	---	---	---	---	---
Cruckton: 21	B	None	---	---	>60	---	Moderate.
Cushman: 22, 23	C	None	---	---	20-40	Rippable	Moderate.
[1]24: Cushman part	C	None	---	---	20-40	Rippable	Moderate.
Kutch part	C	None	---	---	20-40	Rippable	Moderate.
Elbeth: 25, 26	B	None	---	---	>60	---	Moderate.
[1]27: Elbeth part	B	None	---	---	>60	---	Moderate.

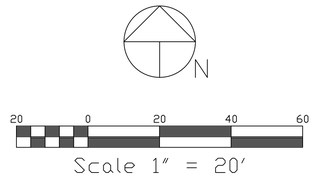
See footnote at end of table.





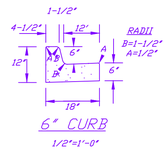
VICINITY MAP

N.T.S.



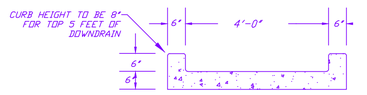
LEGEND:

10.5/20.4	RUNOFF IN CFS 5-YEAR/100-YEAR
A	LIMIT OF DRAINAGE BASIN AND DESIGNATION
	EXISTING STORM SEWER AS LABELED
	PROPOSED STORM SEWER AS LABELED
B	LIMIT OF SOILS TYPE AND GROUP



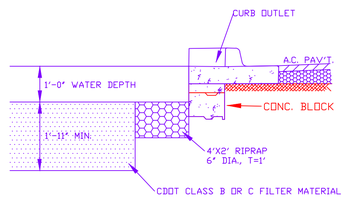
6" CURB

1/2"=1'-0"



DOWNDRAIN SECTION

1/2" = 1'-0"



SAND FILTER SECTION

1/2" = 1'-0"

DRAWN BY: D.E. WATTS DATE: 9-27-18 DWG. NO.: 18-5237-02 TOPOGRAPHY BY: CITY FIMS BASE PLAN BY: JOHN NELSON	APPROVED BY: PROJ. NO. DWG.	REVISIONS	OLIVER E. WATTS CONSULTING ENGINEER COLORADO SPRINGS	PROJECT 5819 PALMER PARK BLVD. LOT 1, POWERS CENTER FIL. NO. 3 EL PASO COUNTY	SHT. NAME DRAINAGE PLAN	SHT. NO. 1 OF 1

Markup Summary

Daniel Torres (4)

Resolved - DTorres
11/14/2018 11:42:55 AM

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Page Label: 5
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Author: Daniel Torres
Date: 11/14/2018 11:42:55 AM
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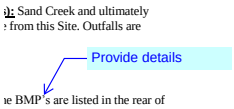

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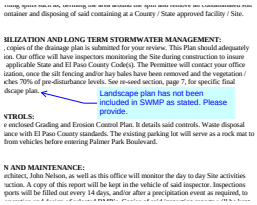
Provide details



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Author: Daniel Torres
Date: 11/14/2018 11:56:30 AM
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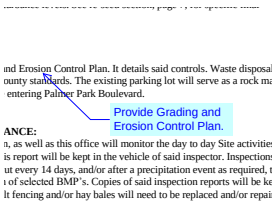
Landscape plan has not been included in SWMP as stated. Please provide.



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Provide Grading and Erosion Control Plan.