DRAINAGE PLANS FOR:

CHAPMAN MEADOWS

SPOKANE COUNTY, WASHINGTON

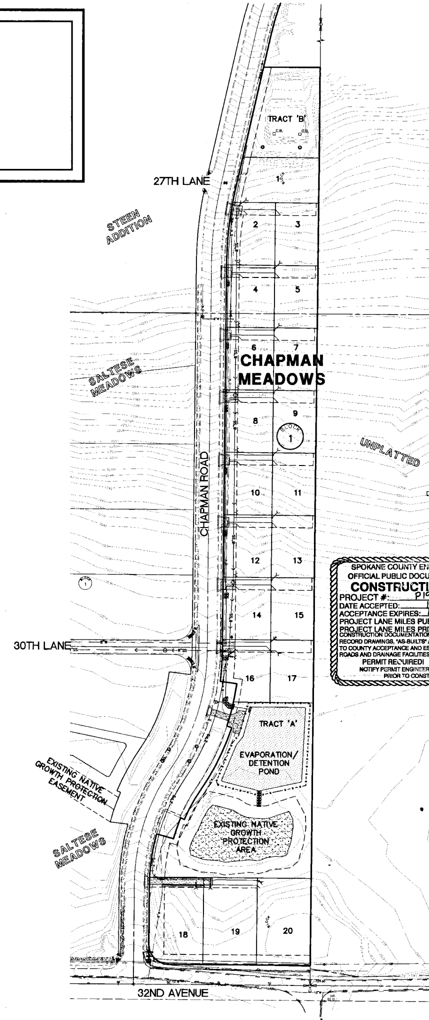
SOUTHEAST 1/4 OF S.25, T.25N., R.44E., W.M.

GENERAL NOTES:

1. ALL MATERIALS AND INSTALLATION SHALL BE IN CONFORMANCE WITH THE "SPOKANE COUNTY STANDARDS FOR ROAD AND SEWER CONSTRUCTION 2001", AS AMENDED, AND PER THE "2002 STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION" AS PUBLISHED BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (W.S.D.O.T.) AND BY THE AMERICAN PUBLIC WORKS ASSOCIATION (APWA).
2. LOCATIONS OF EXISTING UTILITIES SHOWN IN THE PLAN ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES. ANY CONFLICTING UTILITIES SHALL BE RELOCATED PRIOR TO CONSTRUCTION OF ROAD AND DRAINAGE FACILITIES. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES FOR RELOCATION OF POWER POLES, LIGHTS, TELEPHONE, AND/OR OTHER UTILITIES THAT MAY CONFLICT WITH THE CONSTRUCTION.
3. THE CONTRACTOR IS REQUIRED TO HAVE A COMPLETE SET OF THE APPROVED ROAD AND DRAINAGE PLANS ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS. CONTRACTOR SHALL ALSO MAINTAIN ON THE SITE A COMPLETE SET OF RED LINE RECORD DRAWINGS INDICATING ALL CHANGES FROM THE APPROVED DRAWINGS.
4. CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION. IF THE CONTRACTOR DISCOVERS ANY DISCREPANCIES BETWEEN THE PLANS AND EXISTING CONDITIONS ENCOUNTERED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DESIGN ENGINEER AND THE SPOKANE COUNTY ENGINEER'S OFFICE.
5. CONTRACTOR IS RESPONSIBLE FOR REPAIR OF ANY DAMAGE TO ADJACENT EXISTING PROPERTIES OR IMPROVEMENTS. CONTRACTOR IS RESPONSIBLE FOR CLEAN-UP OF ANY AREAS DISTURBED BY HIS ACTIVITIES.
6. SITE EXCAVATION, INCLUDING ROCK CUTS AND REMOVAL, SHALL CONFORM TO SECTION 2-03 OF THE WSDOT STANDARD SPECIFICATIONS. EMBANKMENTS TO BE CONSTRUCTED ACCORDING TO THE APPLICABLE PARAGRAPHS OF SECTION 2-03 OF THE WSDOT STANDARD SPECIFICATIONS. EARTH EMBANKMENTS TO BE CONSTRUCTED USING METHOD B OF 2-03.3(14)C.
7. ALL FILL IN AREAS OUTSIDE OF PAVEMENT SHALL BE COMPACTED IN MAXIMUM 8" LIFTS TO 92% OF MAXIMUM ASTM D 1557 DRY DENSITY. CEMENT CONCRETE APPROACH SUBGRADE SHALL BE COMPACTED TO 95%.
8. FOR ANY CURB GRADES LESS THAN 0.8% (0.008 FT/FT), A WASHINGTON STATE-LICENSED PROFESSIONAL LAND SURVEYOR SHALL VERIFY THAT THE CURB FORMS ARE AT THE GRADES NOTED ON THE APPROVED PLANS, PRIOR TO PLACEMENT OF CURB MATERIAL. THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING AND COORDINATING WORK WITH THE PROFESSIONAL LAND SURVEYOR.

LEGEND

Symbol	Description	Symbol	Description
2353	EXISTING CONTOUR	2250	PROPOSED CONTOUR
	EASEMENT LINE		PLAT BOUNDARY/EXIST. R.O.W.
BT	EXISTING BURIED TELEPHONE		LOT LINE
G	EXISTING BURIED GAS PIPELINE		LIMIT OF PROPOSED EASEMENT
OE	EXISTING OVERHEAD ELECTRICAL	W	NEW WATER LINE
x x x	EXISTING FENCE	SS	NEW SANITARY SEWER LINE
W	EXISTING WATER LINE	SD	NEW STORM DRAIN LINE
SS	EXISTING SEWER LINE		NEW DITCH CENTERLINE
SD	EXISTING STORM DRAIN LINE	x x x	NEW 6' CHAIN LINK FENCE
	EXISTING WATER VALVE		NEW WATER VALVE
	EXISTING WATER LINE FITTING (TYP.)		NEW CONCRETE THRUST BLOCK
	EXISTING FIRE HYDRANT		NEW WATER LINE FITTING (TYP.)
	EXISTING WATER METER AND SERVICE		NEW SANITARY SEWER MANHOLE
	EXISTING SIGN		NEW GRAVEL SURFACE ACCESS
	EXISTING SANITARY SEWER MANHOLE		



NORTH

100 50 0 100 200

SCALE FEET

CONTOUR INTERVAL = 5'

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
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PROJECT #: P1913
DATE ACCEPTED: 10-22-03
ACCEPTANCE EXPIRES: 10-22-05
PROJECT LANE MILES PUBLIC: 0
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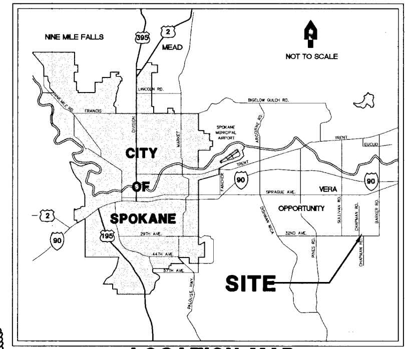
PERMIT REQUIRED! (509) 477-3600
NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION



LOCATION MAP

INDEX OF DRAWINGS

No.	Date	By	Ckd.	Appr.	Revisions
1	08/03	ALB	MFM	MAA	ADDRESS SPOKANE CO. 08/08/03 COMMENTS

		Date
Drawn	ALB	05/19/03
Designed	MFM	05/19/03
Checked	MAA	05/19/03

MICHAEL F. MORSE, STATE OF WASHINGTON, 29107 REGISTERED PROFESSIONAL ENGINEER, 8/14/03
EXPIRES 2/1/05

The design improvements shown in this set of plans and calculations conform to the applicable editions of the Spokane County Standards for Road and Sewer Construction and the Spokane County Guidelines for Stormwater Management. All design deviations have been approved by the Spokane County Engineer. I approve these plans for construction.

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SPOKANE COUNTY PUBLIC WORKS DIVISION OF ENGINEERING AND ROADS
W. 1026 Broadway Ave.
Spokane Wa. 99260-0170
477-3600

Developer's Approval [signature] Date 8/15/03

VERTICAL DATUM: REBAR W/YPC, L.S.#1809, @ CENTERLINE OF CHAPMAN RD. 120'± EAST OF THE INTERSECTION OF DAYBREAK LANE AND CHAPMAN RD. EL = 2341.84 (NAVD 88)

CADD FILE NAME: 02059 ST COVER.dwg

100 50 0 100 200
SCALE FEET

SCALE
HORIZ. N/A
VERT. N/A

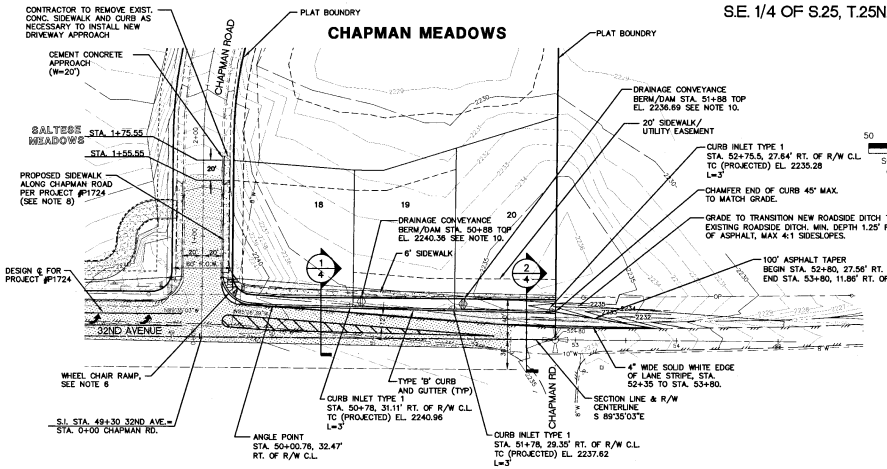
CHAPMAN MEADOWS

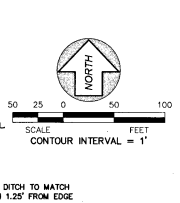
COVER SHEET

COVER SHEET 1 / 5

P-1913 Eng Road & Drainage

S.E. 1/4 OF S.25, T.25N., R.44E., W.M.



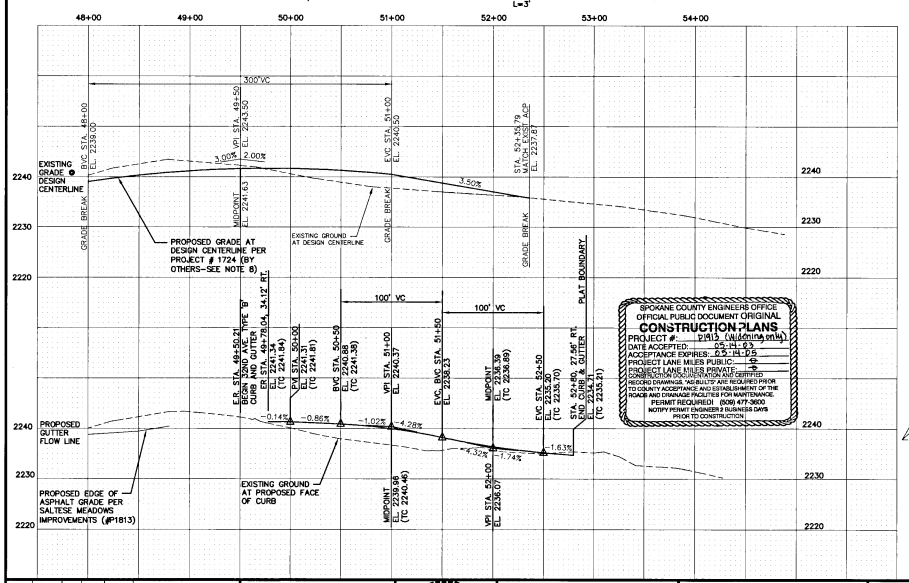


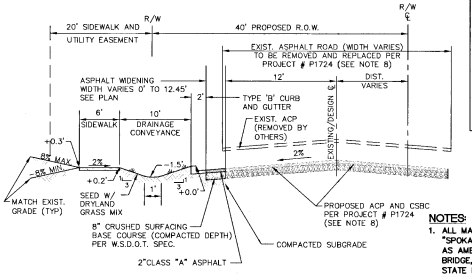
INTERSECTION DETAIL

CURB RETURN DATA – FACE OF TYPE 'B' CURB (THIS SHEET ONLY)				
CURVE	RADIUS	LENGTH	TANGENT	DELTA
C1	30.00'	45.05'	28.0'	86°02'50"

LEGEND

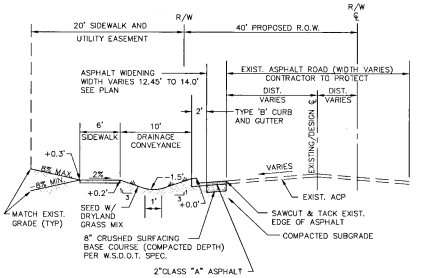
- EXISTING CONTOUR
- EASEMENT LINE
- EXISTING BURIED TELEPHONE
- EXISTING BURIED GAS PIPELINE
- EXISTING OVERHEAD POWER
- EXISTING WATER LINE
- EXISTING TELEPHONE PEDESTAL
- EXISTING POWER POLE
- EXISTING WATER VALVE
- EXISTING WATER LINE FITTING (TYP.)
- EXISTING FIRE HYDRANT
- EXISTING SIGN
- PROPOSED CONTOUR
- PLAT BOUNDRY
- LOT LINE
- PROPOSED WHEEL CHAIR RAMP
- PROPOSED CURB INLET
- PROPOSED CONC. SIDEWALK
- PROPOSED TYPE B CURB & GUTTER
- 32ND AVE. IMPROVEMENTS WIDENING ACP
- 32ND AVE. SIGHT DISTANCE IMPROVEMENTS AT CHAPMAN ROAD INTERSECTION (#P1724) ACP.





32ND AVE. ROAD IMPROVEMENTS SECTION STA. 49+50.21 TO STA. 52+35

1/4 NOT TO SCALE



32ND AVE. ROAD WIDENING AND IMPROVEMENTS SECTION STA. 52+35 TO STA. 52+80

2/4 NOT TO SCALE

NOTES:

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3. SEED ALL DISTURBED AREAS AND DRAINAGE CONVEYANCE AREAS (BETWEEN SIDEWALK AND BACK OF TYPE 'B' CURB & GUTTER) WITH DRYLAND GRASS SEED MIX, PER SPOKANE COUNTY STANDARDS.
4. CEMENT CONCRETE CURB AND GUTTER TYPE 'B' IS PER SPOKANE COUNTY STANDARD PLAN NO. A-3.
5. SIDEWALKS AND DRIVEWAYS ARE PER SPOKANE COUNTY STANDARD PLAN NO. A-4.
6. WHEELCHAIR RAMP (DESIGN 'B') IS PER SPOKANE COUNTY STANDARD PLAN NO. A-5.
7. CURB INLET TYPE 1 IS PER SPOKANE COUNTY STANDARD PLAN NO. B-8.
8. SEE "32ND AVENUE SIGHT DISTANCE IMPROVEMENTS AT CHAPMAN ROAD INTERSECTION" ACCEPTED PLANS (SPOKANE COUNTY PROJECT #P1724) FOR INFORMATION REGARDING ADDITIONAL IMPROVEMENTS TO 32ND AVENUE EAST OF STATION 47+00, LEFT.
9. CEMENT CONCRETE APPROACH IS PER SPOKANE COUNTY STANDARD PLAN NO. A-7.
10. DRAINAGE CONVEYANCE BERM/DAMS SHALL BE CONSTRUCTED OF COMPACTED SOIL WITH TOP WIDTH 2' MIN. & SIDESLOPES 3H TO 1V.
11. ALL FILL IN AREAS OUTSIDE OF PAVEMENT SHALL BE COMPACTED IN MAXIMUM 8" LIFTS TO 92% OF MAXIMUM ASTM D 1557 DRY DENSITY. PAVEMENT SUBGRADE SHALL BE COMPACTED TO 95%

UNDERGROUND SERVICE ALERT ONE-CALL NUMBER 456-8000 CALL TWO BUSINESS DAYS BEFORE YOU DIG

No.	Date	By	Ckd.	Appr.	Revisions

Drawn GRG/ALB Date 4/3/03
Designed GRG 4/2/03
Checked MFM 4/3/03

EXPIRES 2/1/05

The design improvements shown in this set of plans and calculations conform to the applicable editions of the Spokane County Standards for Road and Sewer Construction and the Spokane County Guidelines for Stormwater Management. All design deviations have been approved by the Spokane County Engineer. I approve these plans for construction.

Developer's Approval _____ Date 5/1/03

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SPOKANE COUNTY PUBLIC WORKS DIVISION OF ENGINEERING AND ROADS
W. 1026 Broadway Ave.
Spokane Wa. 99260-0170
477-3600

VERTICAL DATUM: REBAR W/YPC, L.S.#7609, @ CENTERLINE OF CHAPMAN RD. 120'± EAST OF THE INTERSECTION OF DAISY RD. LINE AND CHAPMAN RD. EL = 2241.84 (NAVD 88)

CADD FILE NAME: 02059R15.DWG

50 25 0 50 100
SCALE FEET

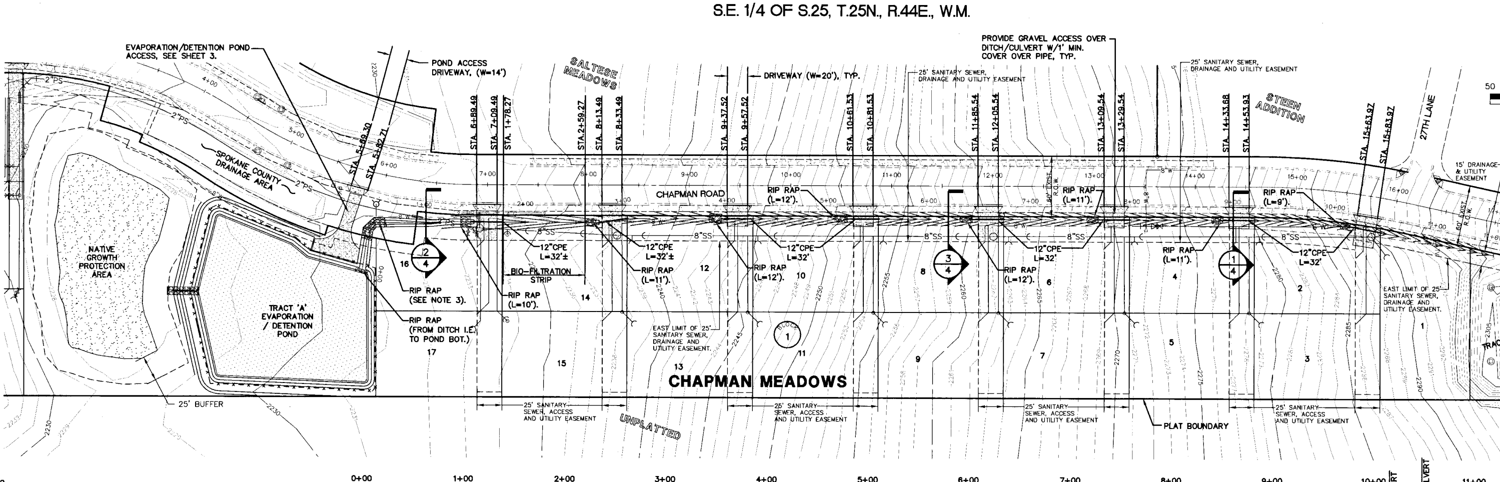
SCALE
HORZ. 1"=50'
VERT. 1"=10'

CHAPMAN MEADOWS

32ND AVENUE IMPROVEMENTS STA.49+50.21 TO STA. 53+80

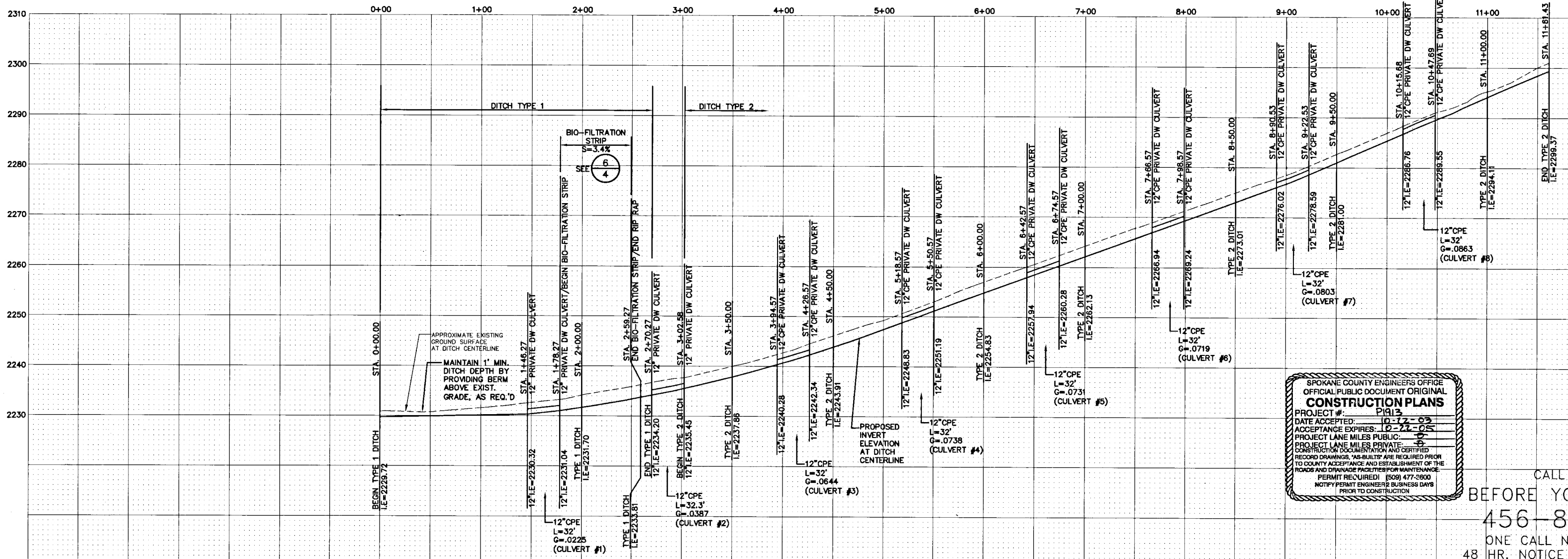
ROAD
SHEET 1 / 1

P-1913 Eng Road & Drainage



NOTES:

1. CEMENT CONCRETE APPROACHES FOR PRIVATE DRIVEWAYS AND POND ACCESS SHALL BE PER SPOKANE COUNTY STD. PLAN A-7.
2. STATIONING FOR DRIVEWAYS IS BASED ON CHAPMAN ROAD STATIONING. STATIONING FOR BACK OF WALK STORM DITCH IS BASED ON CENTERLINE OF DITCH.
3. LINE DITCH TYPE 1 W/2" TO 6" RIPRAP, 1' THICK W/UNDERLYING FILTER FABRIC (AMOCO 4545) ALONG DITCH CURVE TO 10' BEYOND BEGINNING AND END OF CURVE.
4. CORRUGATED POLYETHYLENE PIPE (CPE) SHALL MEET THE REQUIREMENTS OF AASHTO M294 AND BE PROVIDED WITH SMOOTH INTERIOR WALLS.
5. 2" TO 6" RIP RAP AT CULVERT OUTLETS SHALL BE SHOT ROCK INSTALLED TO 1' DEPTH W/UNDERLYING FILTER FABRIC (AMOCO 4545)



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2	08/03	MFM	MFM	MAA	ADDRESS SPOKANE COUNTY 08/08/03 COMMENTS
1	07/03	MFM	MFM	MAA	ADDRESS SPOKANE COUNTY 06/23/03 COMMENTS

		Date
Drawn	ALB	05/19/03
Designed	MFM	05/19/03
Checked	MAA	05/19/03

MICHAEL F. MOSER — STATE OF WASHINGTON — 29107 REGISTERED PROFESSIONAL ENGINEER — EXPIRES 2/1/05

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CADD FILE NAME: 02059 ST P&P.dwg

50 25 0 50 100
SCALE FEET

SCALE
HORIZ. 1"=50'
VERT. 1"=10'

CHAPMAN MEADOWS

BACK OF WALK STORM DITCH
STA. 0+00 TO 11+6143
(CHAPMAN ROAD
STA. 5+97.20 TO STA. 17+05.49)

STORM
SHEET 2 / 5

P-1913 Eng Roads Drainage

EVAPORATION/DETENTION POND CONSTRUCTION NOTES:

1. TOPSOIL SHALL BE STRIPPED FROM THE EVAPORATION/DETENTION POND AREA AND STOCKPILED FOR USE IN THE 9" TOPSOIL LAYER IN THE POND. THE EXISTING TOPSOIL DEPTH IS APPROXIMATELY 1.0 TO 1.5 FEET DEEP IN THE POND AREA.

2. POND SUBGRADE SHALL CONSIST OF THE NATIVE ON-SITE SAND. THE NATIVE STRIPPED SUBGRADE SHALL NOT BE PROOF-COMPACTED DUE TO SHALLOW GROUNDWATER BELOW THE POND BOTTOM. ON-SITE SAND FILL TO CONSTRUCT THE POND BOTTOM SHALL BE PLACED IN LIFTS NOT EXCEEDING 8-INCHES, AT A MOISTURE CONTENT WITHIN 2% OF OPTIMUM AND COMPACTED TO 85% OF MODIFIED PROCTOR MAXIMUM UNIT WEIGHT.

3. POND BERMS SHALL BE CONSTRUCTED USING IMPORTED FILL OR ON-SITE NATIVE SOIL EXCLUDING THE TOPSOIL. IMPORTED FILL SHALL CONSIST OF SILTY SAND AND GRAVEL WITH NO PARTICLES LARGER THAN 5-INCHES IN DIAMETER, NOT MORE THAN 35%, BUT NOT LESS THAN 15% PASSING THE NUMBER 200 SIEVE.

4. POND BERM MATERIAL SHALL BE PLACED WITHIN 2% OF OPTIMUM MOISTURE CONTENT, IN LIFTS NOT EXCEEDING 8-INCHES AND COMPACTED TO 93% OF THE MAXIMUM DRY UNIT WEIGHT AS DETERMINED BY THE MODIFIED PROCTOR METHOD.

5. THE IMPORTED LOW PERMEABILITY SOIL MATERIAL SHALL BE COMPACTED TO A 6-INCH DEPTH (MINIMUM) AND COMPACTED TO AT LEAST 90% OF ITS MAXIMUM DRY UNIT WEIGHT AS DETERMINED BY THE MODIFIED PROCTOR METHOD. THE IMPORTED SILT/CLAY MATERIAL SHALL HAVE AN APPROXIMATE PERMEABILITY IN THE ORDER OF $1x10^{-6}$ CM/SEC. TO $1x10^{-8}$ CM/SEC.

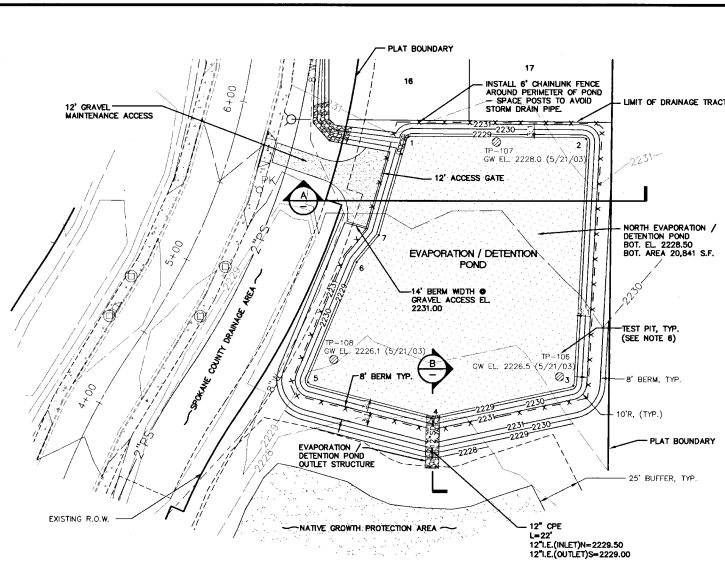
6. TEST PITS SHOWN ON THIS SHEET WERE LOGGED BY CUMMINGS GEOTECHNOLOGY, INC. AND ARE INCLUDED IN THEIR REPORT DATED JUNE 11, 2003. THE CONTRACTOR SHALL MONITOR THE DEPTH OF GROUNDWATER WITHIN THE LIMITS OF POND BOTTOM AND BERMS AND COMPLETE THE POND WORK WHEN THE GROUNDWATER IS A MINIMUM OF 1 FOOT BELOW THE LOWEST LEVEL OF PLANNED EXCAVATION (APPROX. EL. 2227.25). LIKELY IN LATE SUMMER AND/OR EARLY FALL. THE CONTRACTOR SHALL MONITOR THE GROUNDWATER LEVEL PERIODICALLY BY EXCAVATING SHALLOW BACKHOE TEST PITS OR BY COMPLETING HAND AUGER BORINGS, IN AREAS OF POND EXCAVATION. THE CONTRACTOR SHALL PROVIDE TO THE ENGINEER THE DATE AND ELEVATION OF GROUNDWATER, WITHIN THE LIMITS OF POND CONSTRUCTION, BEFORE, DURING, AND AFTER POND CONSTRUCTION. THE MEASUREMENTS SHALL INDICATE THAT THE POND SYSTEM WAS CONSTRUCTED WHEN THE GROUNDWATER WAS NO CLOSER THAN 1-FOOT FROM THE LOWEST LEVEL OF POND EXCAVATION. THE ENGINEER WILL PROVIDE A TEMPORARY BENCHMARK, WITHIN THE VICINITY OF THE POND, FOR GROUNDWATER LEVEL MONITORING.

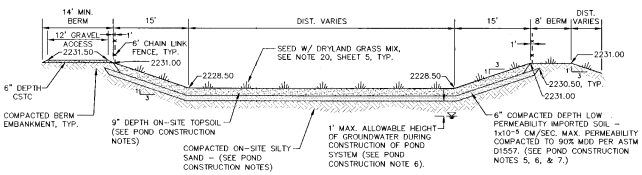
7. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER IN ORDER TO OBTAIN A MINIMUM OF ONE SAMPLE OF IN-PLACE LOW PERMEABILITY SOIL MATERIAL. THE SAMPLE WILL BE LABORTORY TESTED TO VERIFY THAT THE CONSTRUCTED MATERIAL IS LESS THAN OR EQUAL TO THE REQUIRED PERMEABILITY RATE OF $1x10^{-6}$ CM/SEC.

8. CORRUGATED POLYETHYLENE PIPE (CPE) SHALL MEET THE REQUIREMENTS OF AASHTO M294 AND BE PROVIDED WITH SMOOTH INTERIOR WALLS.

EVAPORATION/DETENTION POND HORIZONTAL CONTROL

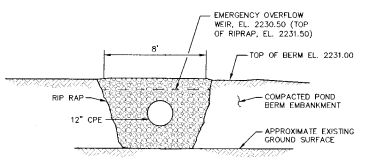
SEGMENT	BEARING	DISTANCE
1–2	N89°37'06"W	60.61'
2–3	S03°03'32"W	143.86'
3–4	S77°54'05"W	41.90'
4–5	N75°28'25"W	74.49'
5–6	N22°37'34"E	40.66'
6–7	S39°32'18"W	20.75'
7–1	S16°06'56"W	59.53'



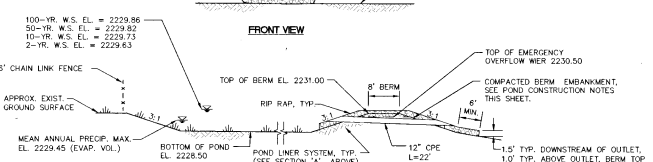


A — EVAPORATION / DETENTION POND TYPICAL SECTION

NOT TO SCALE



FRONT VIEW



SIDE VIEW

B — EVAPORATION/DETENTION POND OUTLET STRUCTURE SECTION

NOT TO SCALE

NOTES:

1. RIP RAP PAD SHALL BE INSTALLED AS FOLLOWS:
   A) IN A 8' SWATH FROM POND BOTTOM, UP THE SIDE SLOPE AND OVER TOP OF THE BERM.
   B) DOWN THE OUTSIDE OF THE BERM (8' WIDE SWATH) EXTENDING 6' BEYOND THE CATCH POINT.
2. RIP RAP SHALL BE INSTALLED 1.5' THICK WITH THE FOLLOWING GRADATION:
   40% TO 90% MAX. STONE SIZE=6" DIA.
   70% TO 90% MED. STONE SIZE=4" DIA.
   10% TO 30% MIN. STONE SIZE=2" DIA.
3. FILTER FABRIC SHALL BE INSTALLED UNDER ALL RIP RAP AND SHALL BE AMCO 4545 OR APPROVED EQUAL.

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					06/23/03 COMMENTS

Drawn ALB Date 05/19/03
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30 15 0 30 60
SCALE FEET

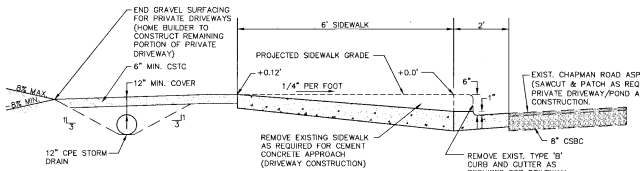
SCALE
HORIZ. AS NOTED
VERT. N/A

CHAPMAN MEADOWS

EVAPORATION / DETENTION POND PLAN AND SECTIONS

DETAIL
SHEET 3 / 5

P-1913 Eng Road Drawings

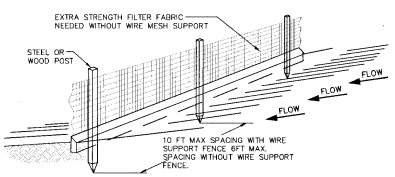


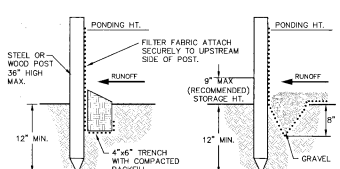
NOTES:

1. SLOPE FROM DRIVEWAY EDGE TO 8" OR 12"SD I.E. AT 3H TO 1V.
2. SEE SPOKANE COUNTY STANDARD PLAN NO. A-7 FOR ADDITIONAL INFORMATION REGARDING CEMENT CONCRETE APPROACHES.

1/2 DRIVEWAY W/STORM DITCH CULVERT

NOT TO SCALE





STANDARD DETAIL
TRENCH WITH NATIVE BACKFILL

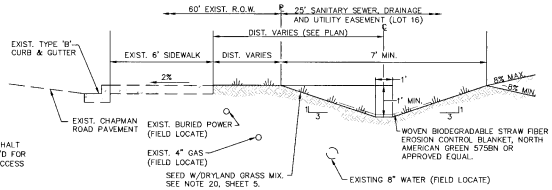
ALTERNATE DETAIL
TRENCH WITH GRAVEL

NOTES:

1. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
2. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFFSITE AND CAN BE PERMANENTLY STABILIZED.
3. SILT FENCE SHALL BE PLACED IN SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY EXACT LOCATIONS TO BE DETERMINED IN THE FIELD.

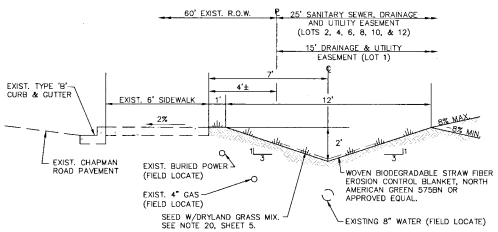
5/5 SILT FENCE

NOT TO SCALE



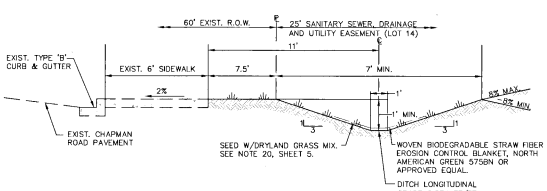
2/2 TYPE 1 DITCH SECTION STA. 0+00 TO STA. 1+78.27 AND STA. 2+59.27 TO STA. 2+70.27)

NOT TO SCALE



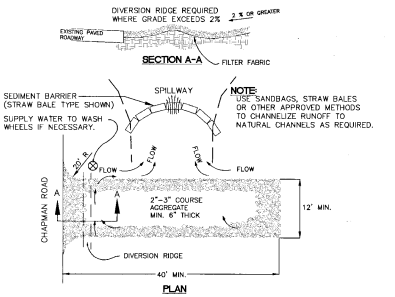
3/2 TYPE 2 DITCH SECTION (STA. 3+02.58 TO STA. 11+61.43)

NOT TO SCALE



6/2 BIO-FILTRATION STRIP SECTION (STA. 1+78.27 TO STA. 2+59.27)

NOT TO SCALE



NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO EXIST. ASPHALT ROADWAYS.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA THAT IS STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

4/5 ROCK CONSTRUCTION ENTRANCE

NOT TO SCALE

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
CONSTRUCTION PLANS
PROJECT #: P#13
DATE ACCEPTED: 10-22-03
ACCEPTANCE EXPIRES: 10-22-05
PROJECT LANE MILES PUBLIC: 0
PROJECT LANE MILES PRIVATE: 0
CONSTRUCTION DOCUMENTATION AND CERTIFIED RECORD DRAWINGS "AS-BUILTS" ARE REQUIRED PRIOR TO COUNTY ACCEPTANCE AND ESTABLISHMENT OF THE ROADS AND DRAINAGE FACILITIES FOR MAINTENANCE.
PERMIT REQUIRED! (509) 477-3600
NOTIFY PERMIT ENGINEER'S BUSINESS DAYS PRIOR TO CONSTRUCTION

No.	Date	By	Ckd.	Appr.	Revisions
1	08/03	ALB	MFM	MAA	ADDRESS SPOKANE COUNTY
					08/08/03 COMMENTS

Drawn: ALB Date: 05/19/03
Designed: MFM Date: 05/19/03
Checked: MAA Date: 05/19/03

EXPIRES 2/1/05

The design improvements shown in this set of plans and calculations conform to the applicable editions of the Spokane County Standards for Road and Sewer Construction and the Spokane County Guidelines for Stormwater Management. All design deviations have been approved by the Spokane County Engineer. I approve these plans for construction.

Taylor Engineering, Inc.
Civil Design and Land Planning
W. 1106 Mission Ave.
Spokane, Washington 99201
(509) 328-3371 FAX (509) 328-8224

Developer's Approval: _____ Date 8/15/03

SPOKANE COUNTY PUBLIC WORKS DIVISION OF ENGINEERING AND ROADS
W. 1026 Broadway Ave.
Spokane Wa. 99260-0170
477-3600

VERTICAL DATUM: REBAR W/YPC, LS.#1806, @ CENTERLINE OF CHAPMAN RD. 1207± EAST OF THE INTERSECTION OF DAYBREAK LANE AND CHAPMAN RD. EL = 2341.84 (NAVD 88)

CADD FILE NAME: 02059 ST DETAIL2.dwg

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SCALE FEET

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HORIZ. AS NOTED
VERT. N/A

CHAPMAN MEADOWS

TEMPORARY EROSION/SEDIMENT CONTROL AND DRAINAGE DETAILS

DETAIL SHEET 4/5

P-1913 Eng Construction Drawings

EROSION AND SEDIMENT CONTROL PLAN FOR CHAPMAN MEADOWS

(A RESIDENTIAL PLAT)

S.E. 1/4 OF SECTION 25, T.25 N., R.44 E., W.M.

SPOKANE COUNTY, WASHINGTON

EROSION CONTROL NOTES:

1. AN EROSION/SEDIMENT CONTROL (ESC) PLAN IS REQUIRED FOR THIS PROJECT. IMPLEMENTATION OF THE ESC PLAN, AND CONSTRUCTION, MAINTENANCE AND UPGRADING OF THE ESC FACILITIES ARE THE RESPONSIBILITY OF THE DEVELOPER UNTIL ALL CONSTRUCTION IS COMPLETED AND ACCEPTED BY SPOKANE COUNTY OR UNTIL VEGETATION IS ESTABLISHED THROUGHOUT THE SITE AND ACCEPTED BY SPOKANE COUNTY, WHICHEVER IS LATER.
2. APPROVAL OF THE ESC PLAN DOES NOT CONSTITUTE APPROVAL OF ANY OF THE PROPOSED ROAD, STORM DRAINAGE, GRADING OR UTILITY DESIGN ELEMENTS SHOWN ON THE ESC PLAN.
3. THE EROSION/SEDIMENTATION CONTROL MEASURES SHOWN ARE THE MINIMUM REQUIREMENTS FOR THE ANTICIPATE SITE CONDITIONS. THE CONTRACTOR SHALL INSPECT AND MAINTAIN THESE ESC MEASURES DAILY AND SHALL MAINTAIN AND UPGRADE THESE MEASURES AS NECESSARY TO PREVENT SEDIMENT-LADEN WATER FROM EITHER FLOWING OFF THE SITE OR INTO NEW/EXISTING STORM DRAINAGE FACILITIES, SUCH AS DRYWELLS, CULVERTS, OR GRAVEL GALLERIES.
4. THE CONTRACTOR/DEVELOPER IS RESPONSIBLE FOR INSTALLING ROCK CONSTRUCTION ENTRIES AT ANY AND ALL LOCATIONS USED TO ENTER OR EXIT THE PROJECT SITE. ACCESS FOR CONSTRUCTION VEHICLES SHOULD BE LIMITED TO ONE ROUTE WHENEVER POSSIBLE. CONTROL FACILITIES WILL BE MAINTAINED WHILE CONSTRUCTION IS IN PROGRESS, MOVED WHEN NECESSARY AND REMOVED WHEN THE SITE IS PAVED. SEE DETAIL 1, THIS SHEET.
5. CONTRACTOR TO PREVENT AGAINST SEDIMENTATION BY INSTALLING GEOTEXTILE FABRIC BETWEEN THE RIM AND GRATE OF DRYWELLS, CATCH BASINS AND INLETS UNTIL SUCH TIME THE VEGETATION ON THE SITE IS ESTABLISHED AND THE THREAT OF SEDIMENT DEPOSITION INTO THE DRAINAGE SYSTEM IS MITIGATED.
6. AT ALL TIMES DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING AND CONTROLLING EROSION DUE TO WIND AND RUNOFF. CONTRACTOR IS RESPONSIBLE FOR SUPPRESSION OF DUST IN CONFORMANCE WITH SCAPCA REGULATIONS. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE EROSION CONTROL FACILITIES SHOWN AS A MINIMUM.
7. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DUE TO UNFORESEEN PROBLEMS OR IF THE PLAN DOES NOT FUNCTION AS INTENDED. THE INTENT IS TO KEEP SEDIMENT ON THE PROJECT SITE AND NOT ALLOW IT TO REACH ADJACENT PROPERTIES, WATER BODIES, AND PUBLIC OR PRIVATE ROADS.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PERMANENT AND DOWNSTREAM STORMWATER MANAGEMENT FACILITIES DURING CONSTRUCTION AND FOR CLEANING DRAINAGE AND EROSION CONTROL FACILITIES AS REQUIRED. STREETS SHALL BE KEPT CLEAN OF DEBRIS FROM TRAFFIC FROM THE SITE.
9. THE CONTRACTOR SHALL DESIGNATE AND POST A LOCATION FOR A SLURRY PIT WHERE CONCRETE TRUCKS AND EQUIPMENT CAN BE WASHED OUT. SLURRY PITS SHALL NOT BE LOCATED IN NOR DRAIN INTO A SWALE, DRAINAGE AREA, STORMWATER FACILITY OR WATER BODY, EITHER EXISTING OR PROPOSED. HARDENED WASH CONCRETE SHALL BE BROKEN UP AND REMOVED FROM THE SITE.
10. CONTRACTOR SHALL IDENTIFY A LOCATION FOR STORAGE/STOCKPILE AREAS (WITHIN THE PROPOSED ESC PLAN BOUNDARIES) FOR ANY SOIL, EARTHEN AND LANDSCAPE MATERIAL THAT IS TO BE USED ON-SITE.
11. CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN ALL EROSION AND SEDIMENT CONTROL BMP's DURING ALL LAND-DISTURBING ACTIVITIES. CONTRACTOR SHALL INSPECT ALL EROSION CONTROL STRUCTURES AFTER EVERY RAINFALL EVENT, REMOVE DEBRIS AND SEDIMENT AND MAKE NEEDED REPAIRS.
12. REMOVED SEDIMENT SHALL BE DEPOSITED IN AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
13. CONTRACTOR SHALL FIELD IDENTIFY AND DELINEATE ALL CLEARING LIMITS, SENSITIVE/CRITICAL AREAS, BUFFERS, TREES TO BE PRESERVED AND DRAINAGE COURSES.
14. CONSTRUCTION OF ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF OTHER LAND DISTURBING ACTIVITIES.
15. ALL AREAS DISTURBED DURING CONSTRUCTION AND NOT RECEIVING PAVEMENT, GRAVEL, OR LANDSCAPE TREATMENT SHALL BE STABILIZED BY APPLICATION OF A HYDROSEED MIXTURE OF DRYLAND GRASS SEED.
16. EROSION CONTROL STRUCTURES BELOW SODDED OR RIP RAPPED AREAS MAY BE REMOVED ONCE SOD AND FINAL LANDSCAPING IS IN PLACE. EROSION CONTROL STRUCTURES BELOW SEEDED AREAS MUST REMAIN IN PLACE UNTIL THE ENTIRE AREA HAS ESTABLISHED A MATURE COVERING OF HEALTHY VEGETATION. EROSION CONTROL IN PROPOSED PAVED AREAS SHALL REMAIN IN PLACE UNTIL PAVEMENT IS COMPLETE.
17. ALL TEMPORARY SEDIMENT CONTROL BMP's SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY BMP's ARE NO LONGER NEEDED.
18. CONTRACTOR SHALL CONTROL ALL ON-SITE POLLUTANTS OTHER THAN SEDIMENT IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORMWATER OR GROUNDWATER.
19. THIS PLAN IS ONLY TO BE USED FOR INSTALLATION OF EROSION CONTROL FACILITIES. DO NOT USE THIS PLAN FOR GRADING OR STORM SEWER CONSTRUCTION.
20. ALL PONDS AND DISTURBED AREAS SHALL BE SEEDED W/DRYLAND GRASS SEED MIX AS FOLLOWS:

    DRYLAND SEED MIX REQUIREMENTS:

    GRASS SEED : PROVIDE FRESH, CLEAN, NEW CROP SEED COMPLYING WITH TOLERANCE OF PURITY AND GERMINATION ESTABLISHED BY THE OFFICIAL SEED ANALYSIS OF NORTH AMERICA.

    PROVIDE SEED MIXTURE COMPOSED OF GRASS SPECIES AND PERCENTAGES AS FOLLOWS:

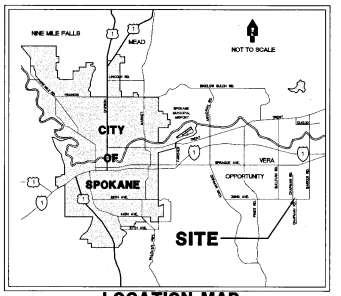
10 PERCENT	ELKA PERENNIAL RYE
15 PERCENT	REUBENS CANADIAN BLUEGRASS
20 PERCENT	DURAR HARD FESCUE
45 PERCENT	COVAR/SHEEP FESCUE

    PROVIDE MIXTURE COMPOSED OF GRASS SEED AND FERTILIZER IN PERCENTAGES AS FOLLOWS:

GRASS SEED:	90 LBS. PER ACRE
FERTILIZER:	16-16-16 TIMED RELEASE COMPOSITION, 300LBS PER ACRE

    ALL SEEDING OF SLOPES SHALL BE DONE IN ACCORDANCE WITH THE WSDOT STANDARD SPECIFICATIONS, SEC. 8-01.
21. CONTRACTOR SHALL PROVIDE MONITORING AND MAINTENANCE OF THE BIO-FILTRATION STRIP PRE-SETTLING AREA, I.E. SEDIMENT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF APPROXIMATELY 0.75". REGULAR INSPECTIONS OF SETTLING AREA SHALL BE COMPLETED BY THE CONTRACTOR AND ADDITIONAL INSPECTIONS SHALL BE MADE BY THE CONTRACTOR AFTER EACH RUNOFF PRODUCING STORM EVENT.

PROPERTY OWNER:	DAHM CHILDREN TRUST
PERMIT APPLICANT:	FLAGSTONE DEVELOPMENT GROUP, INC.
CONTACT PERSON AT PROJECT SITE:	BRETT T. SULLIVAN
PROJECT ADDRESS:	NORTHEAST OF INTERSECTION OF 32ND AVE. & CHAPMAN ROAD
PROJECT DESCRIPTION:	SINGLE FAMILY RESIDENTIAL DEVELOPMENT INCLUDING PRIVATE DRIVEWAYS, DRAINAGE DITCH, STORMWATER POND, WATER & SEWER SYSTEM EXTENSIONS.
DESCRIPTION OF ESC MEASURES:	ESC MEASURES INCLUDE SILT FENCES & GRAVEL CONSTRUCTION ENTRANCES.
DESCRIPTION OF EXISTING SITE VEGETATION:	SITE IS PRIMARILY COVERED WITH GRASSES AND CATTAILS, WITH A FEW PONDEROSA PINE TREES ALONG THE SOUTHERLY BORDER.
LIST OF ON-SITE SOILS:	BmB – BONG AND PHOEBE LOAMY SAND HhA – HARDESTY SILT LOAM
LEGAL DESCRIPTION:	SEE THIS SHEET



LOCATION MAP

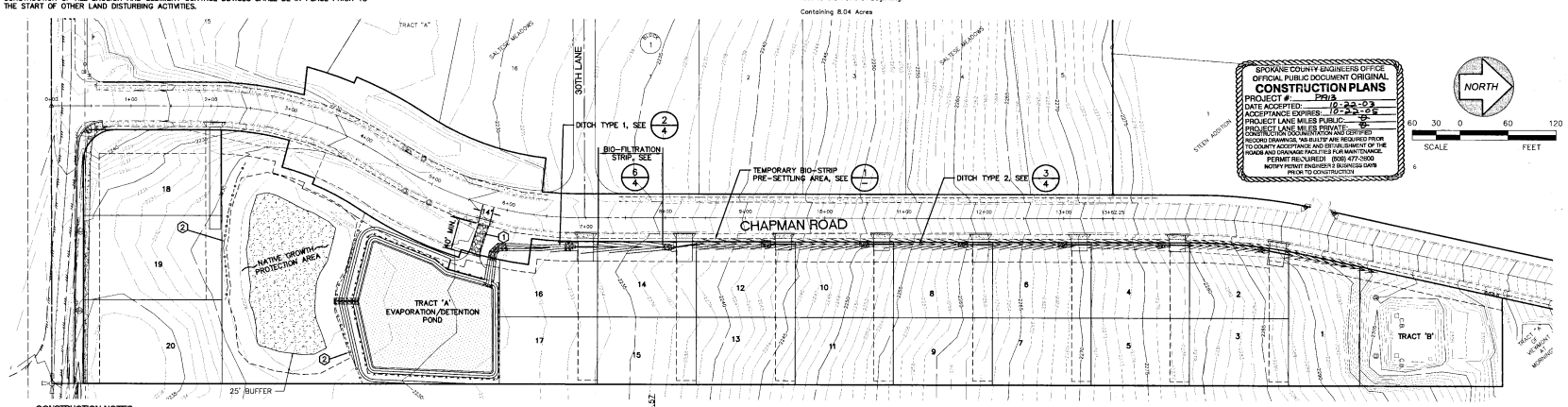
DEDICATION

KNOW ALL MEN BY THESE PRESENTS, that The DAHM CHILDREN TRUST, have caused to be platted into Lots, Blocks, and Streets the land shown hereon, to be known as CHAPMAN MEADOWS, being a parcel of land in the Southeast Quarter of Section 25, T.25 N., R. 44 E., W.M., in Spokane County, State of Washington, described as follows:

A portion of the S.E. ¼ of Section 25, T.25 N., R.44 E., W.M., Spokane County, Washington described as follows:

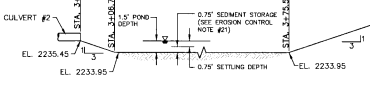
Commencing at the Southeast corner of said S.E. ¼ of Section 25; thence N.00°36'11"E., along the East line of said S.E. ¼ of Section 25, 40.00 feet to the North right of way line of 32nd Avenue and the POINT OF BEGINNING; thence continue N.00°36'11"E., along said East line, 1783.07 feet to the South line of the Plat of Viewmont at Morningside (PUD) as per plat thereof recorded in book 24 of plats, Pages 48 and 49, Spokane County, Washington; thence N.89°38'26"W., along the South line of said plat, 111.42 feet to the East right of way line of Chapman Road as recorded under Auditor's file No. 9312220496 and 4281038; thence S.12°50'39"W., along said East line, 251.59 feet to the beginning of a curve to the left the radius of which bears S.77°09'21"E., a distance of 670.00 feet; thence along said curve to the left and said East line through a central angle of 12°14'28", an arc distance 143.14 feet; thence S.00°36'11"W. along said East line, 777.61 feet to the beginning of a curve to the right the radius of which bears N.89°23'49"W. a distance of 440.00 feet; thence along said curve to the right and said East line through a central angle of 07°09'18", an arc distance of 54.95 feet; thence S.82°14'31"E. along said East line 33.00 feet to the beginning of a curve to the right the radius of which bears N.82°14'31"W. a distance of 473.00 feet; thence along said curve to the right and said East line through a central angle of 10°28'51", an arc distance of 86.52 feet; thence S.71°45'40"E. along said East line 10.00 feet to the beginning of a curve to the right the radius of which bears N.71°45'40"W. a distance of 483.00 feet; thence along said curve to the right and said East line through a central angle of 16°20'26", an arc distance of 137.75 feet to the beginning of a curve to the left the radius of which bears S.55°25'14"E. a distance of 337.00 feet; thence along said curve to the left and said East line through a central angle of 11°36'30", an arc distance of 68.28 feet; thence N.67°01'44"W along said East line 8.00 feet to the beginning of a curve to the left the radius of which bears S.67°01'44"E. a distance of 345.00 feet; thence along said curve to the left and said East line through a central angle of 07°16'37", an arc distance of 43.82 feet; thence N.74°18'21"W. along said East line 35.00 feet to the beginning of a curve to the left the radius of which bears S.74°18'21"E., a distance of 380.00 feet; thence along said curve to the left and said East line through a central angle of 15°05'28", an arc distance of 100.09 feet; thence S.00°36'11"W., 119.71 feet to the beginning of a curve to the left the radius of which bears S.89°23'49"E., a distance of 40.00 feet; thence along said curve to the left, through a central angle of 90°11'14", an arc distance of 62.96 feet to the North right of way line of 32nd Avenue; thence S.89°35'03"E., 279.87 feet to the Point of Beginning.

Containing 8.04 Acres



CONSTRUCTION NOTES:

1. INSTALL TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT. SEE DETAIL 4, SHEET 5.
2. INSTALL SILT FENCE, SEE DETAIL 5, SHEET 5.



TEMPORARY BIO-STRIP PRE-SETTLING AREA

NOT TO SCALE

PRE-SETTLING AREA NOTES:

1. THE BOTTOM WIDTH OF THE SETTLING AREA SHALL BE 1' MIN.
2. THE BIO-STRIP PRE-SETTLING AREA SHALL BE REMOVED AND DITCH TYPE 2 CONSTRUCTED WITHIN 30 DAYS AFTER ESTABLISHMENT OF VEGETATION IN THE BIO-FILTRATION STRIP.

CALL BEFORE YOU DIG 456-8000 ONE CALL NUMBER 48 HR. NOTICE REQUIRED

Developer's Approval _____ Date 8/15/03

EXPIRES 2/1/05

THE EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THIS PLAN CONFORM TO THE REQUIREMENTS LISTED IN CHAPTER 4.5 OF THE APPLICABLE EDITIONS OF THE GUIDELINES FOR STORMWATER MANAGEMENT AS PUBLISHED BY THE SPOKANE COUNTY DIVISION OF ENGINEERING AND ROADS.

REVISIONS

2. 08/03 ADDRESS SPOKANE COUNTY 08/08/03 COMMENTS
1. 07/03 ADDRESS SPOKANE COUNTY 06/23/03 COMMENTS

DWN: ALB DATE: 05/19/03
CK'D: MFM DATE: 05/19/03

Taylor Engineering, Inc.
Civil Design and Land Planning
W. 108 Mission Ave.
Spokane, Washington 99201
(509) 328-3971 FAX (509) 328-8224

SCALE: 1"=60'

SHEET 5 OF 5

TEMPORARY EROSION AND SEDIMENT CONTROL PLAN

CHAPMAN MEADOWS

02059-ERO1

P-1113 Eng Land Drainage