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COMPLETED BY: CAE

CHECKED BY: DOR

PROJECT NAME: LAK-6-2.06

PROJECT LOCATION: Willoughby Hills (LAK County)

OF 38 SHEET #: 1 DATE: 3/4/2025 SUBJECT: Quantity Summary Report

PROJECT

74567

SOBE20001 CONCRETE REINFORCEMENT, REPLACEMENT OF EXISTING CONCRETE REINFORCEMENT, AS PER PLAN 1,000.00 LB U SOBE20001 UNCOATED STEEL REINFORCEMENT 1,600.00 LB U SOBE20001 NO. A DEFORMED GRFP REINFORCEMENT 13,528.00 FT U S10E10001 DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN 216.00 EACH M S11E34446 CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK 525.00 CY U S11E34451 CLASS QC1 CONCRETE WITH QC/QA, PRIDGE DECK 137.00 CY U S11E44512 CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS 177.00 CY S S11E446112 CLASS QC1 CONCRETE WITH QC/QA, REITAINING/WINGWALL NOT INCLUDING FOOTING 83.00 CY S S12E10100 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) 1,553.00 SY S S12E12000 WELDED STUD SHEAR CONNECTORS 9,400.00 EACH S S12E12000 WELDED STUD SHEAR CONNECTORS 9,400.00 EACH S S14E00060 FIELD PAINTING STRUCTURAL STEEL, FINISH COAT 31,801.00	ITEM	DESCRIPTION	QUANTITY	UNIT	ТҮРЕ
Soldzillo UNCLASSIFIED EXCAVATION 329.00 CY S SOBE21000 EPOXY COATED REINFORCING STEEL 209,334.00 LB M SOBE20001 CONCRETE REINFORCING STEEL 209,334.00 LB U SOBE20001 CANCRETE REINFORCIMENT, REPLACEMENT OF EXISTING CONCRETE REINFORCEMENT 1,000.00 LB U SOBE20001 NO. 4 DEFORMED GRFP REINFORCEMENT 13,528.00 FT U SIDE10001 DOWEL HOLES WITH NONSHRIK, NONMETALLIC GROUT, AS PER PLAN 216.00 EACH M SI1E34446 CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN 137.00 CY U S11E34451 CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS 177.00 CY S S11E34451 CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING 43.00 CY S S11E4012 CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING 43.00 CY S S11E4012 CLASS QC1 CONCRETE SURFACES (EPOXY-URETHANE) 1,553.00 SY S S12E10100 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)<	202E11203	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	1.00	LS	S
Sobelation EPOXY COATED REINFORCING STEEL 209,334.00 LB M 509E120001 CONCRETE REINFORCEMENT, REPLACEMENT OF EXISTING CONCRETE REINFORCEMENT 1,000.00 LB U 509E120001 NO. A DEFORMED GREP REINFORCEMENT 13,528.00 FT U 509E12001 DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN 216.00 EACH M 511E34451 CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN 137.00 CY B 511E34451 CLASS QC2 CONCRETE WITH QC/QA, PRIDGE DECK (PARAPET), AS PER PLAN 137.00 CY S 511E44512 CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS 177.00 CY S 511E44112 CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING 43.00 CY S 512E10100 SEALING OF CONCRETE SURFACES (EPOX-URETHANE) 1,553.00 SY S 513E10240 VIPE 2 WATERPROOFING 30.00 SY S 514E10000 FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT 31,801.00 SF U 514E20000 FIELD PAINTING STRUCTURAL	202E22900	APPROACH SLAB REMOVED	167.00	SY	S
S09E20001 CONCRETE REINFORCEMENT, REPLACEMENT OF EXISTING CONCRETE REINFORCEMENT, AS PER PLAN LB U 509E2000 UNCOATED STEEL REINFORCEMENT 1,600.00 LB U 509E2000 NO. 4 DEFORMED GREP REINFORCEMENT 13,528.00 FT U 511E30446 CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK 525.00 CY R 511E34451 CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK 5316.00 LGX CY S 511E44112 CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK 5310 CY S 511E4412 CLASS QC1 CONCRETE WITH QC/QA, BRIDGE DECK 5310 CY S 511E4412 CLASS QC1 CONCRETE WITH QC/QA, BRIDGE DECK 5310 CY S 511E4412 CLASS QC1 CONCRETE WITH QC/QA, BRIDGE DECK 5310 S7 S 511E44012 CLASS QC1 CONCRETE WITH QC/QA, BRIDGE DECK 5310 S7 S 512E10100 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) 1,553.00 SY S 513E10200 VPE 2 WATERPROOFING 30.00 SY S S	503E21100	UNCLASSIFIED EXCAVATION	329.00	CY	S
S09E20001 AS PER PLAN 1.000.00 LB U S09E20001 UNCOATED STEEL REINFORCEMENT 1.600.00 LB U S09E20020 NO.4 DEFORMED GRP REINFORCEMENT 13.528.00 FT U S10E10001 DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN 216.00 EACH M S11E34446 CLASS QC2 CONCRETE WITH QC/QA, BIDGE DECK S11E34312 CLASS QC2 CONCRETE WITH QC/QA, BIGGE DECK (PARAPET), AS PER PLAN 137.00 CY K S11E34312 CLASS QC1 CONCRETE WITH QC/QA, BUTMENT NOT INCLUDING FOOTING 83.00 CY S S11E44012 CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING 43.00 CY S S12E10100 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) 1.553.00 SY S S12E20000 TYPE 2 WATERPROOFING 30.00 SY S S13E10240 STRUCTURAL STEEL MEMBERS, LEVEL 2 550.447.00 LB U S13E20000 VELD D STUD SHEAR CONNECTORS 9.400.00 EACH S S14E00006 FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE CO	509E10000	EPOXY COATED REINFORCING STEEL	209,334.00	LB	М
S09E30020NO. 4 DEFORMED GRFP REINFORCEMENT13.528.00FTU510E10001DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN216.00EACHM511E34446CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK525.00CYR511E34451CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN137.00CYU511E44112CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS177.00CYS511E44112CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING83.00CYS511E46012CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING43.00CYS512E10100SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)1,553.00SYS513E20000STRUCTURAL STEEL MEMBERS, LEVEL 2550.447.00LBU513E20000WELDED STUD SHEAR CONNECTORS9,400.00EACHS514E00006FIELD PAINTING STRUCTURAL STEEL, INISH COAT31,801.00SFU516E11210STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL85.00FTU516E44001ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (FIXED)5.00EACHR518E40000G" NON-PERFORATED CORRUGATED PLASTIC PIPE.114.00FTS518E40000G" NON-PERFORATED CORRUGATED PLASTIC PIPE.102.00SYS518E40001G" NON-PERFORATED CORRUGATED PLASTIC PIPE.102.00SYS518E40000G" NON-PERFORATED CORRUGATED PLASTIC	509E20001		1,000.00	LB	U
SIDELOOD SIDELOOD SIDELOOD SIDELOOD 	509E25000	UNCOATED STEEL REINFORCEMENT	1,600.00	LB	U
S11E34446CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK525.00CYRS11E34451CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN137.00CYUS11E40512CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS177.00CYSS11E44112CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING83.00CYSS11E44012CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING43.00CYSS12E10100SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)1,553.00SYSS12E20100SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)30.00SYSS13E10240STRUCTURAL STEEL MEMBERS, LEVEL 2550,447.00LBUS13E2000WELDED STUD SHEAR CONNECTORS9,400.00EACHSS14E00060FIELD PAINTING STRUCTURAL STEEL, FINISH COAT31,801.00SFUS16E11210STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL85.00FTUS16E44001ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (FIXED)S.00EACHRS18E40000G'' PERFORATED CORRUGATED PLASTIC PIPE114.00FTSS18E40010G'' PERFORATED CORRUGATED PLASTIC PIPE114.00FTSS18E40010G'' PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS102.00FTSS18E40000G'' PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS102.00FTSS18E40010G'' PERFORATED CORRUGAT	509E30020	NO. 4 DEFORMED GRFP REINFORCEMENT	13,528.00	FT	U
S11E34451CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN137.00CYUS11E40512CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS177.00CYSS11E44112CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING83.00CYSS11E46012CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING43.00CYSS12E10100SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)1,553.00SYSS12E10100SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)1,553.00SYSS13E10240STRUCTURAL STEEL MEMBERS, LEVEL 2550.447.00LBUS13E20000WELDED STUD SHEAR CONNECTORS9,400.00EACHSS14E00060FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT31,801.00SFUS16E1101STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL85.00FFUS16E44001ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (FIXED)S0.00EACHRS18E42000G" PERFORATED CORRUGATED PLASTIC PIPE114.00FTSS18E40000G" PERFORATED CORRUGATED PLASTIC PIPE114.00FTSS18E40000G" PERFORATED CORRUGATED PLASTIC PIPE114.00FTSS18E40000G" PERFORATED CORRUGATED PLASTIC PIPE114.00FTSS18E40000G" PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS102.00FTSS18E40000G" PERFORATED CORRUGATED PLASTIC	510E10001	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	216.00	EACH	М
STIE40512 CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS 177.00 CY S 511E40512 CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING 83.00 CY S 511E46012 CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING 43.00 CY S 511E46012 CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING 43.00 CY S 512E10100 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) 1,553.00 SY S 512E03000 TYPE 2 WATERPROOFING 30.00 SY S 513E10240 STRUCTURAL STEEL MEMBERS, LEVEL 2 550,447.00 LB U 513E20000 WELDED STUD SHEAR CONNECTORS 9,400.00 EACH S 514E00060 FIELD PAINTING STRUCTURAL STEEL, FINISH COAT 31,801.00 SF U 516E1210 STRUCTURAL EXPANSION JOINT FILLER 79.00 SF S 516E44001 ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS 5.00 EACH R 518E40000 G'' PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS <	511E34446	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK	525.00	СҮ	R
S11E44112CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING83.00CYSS11E46012CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING43.00CYSS12E10100SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)1,553.00SYSS12E33000TYPE 2 WATERPROOFING30.00SYSS13E10240STRUCTURAL STEEL MEMBERS, LEVEL 2550,447.00LBUS13E20000WELDED STUD SHEAR CONNECTORS9,400.00EACHSS14E00060FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT31,801.00SFUS14E00066FIELD PAINTING STRUCTURAL STEEL, FINISH COAT31,801.00SFUS16E11210STRUCTURAL EXPANSION JOINT FILLER79.00SFSS16E44001ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (FIXED)5.00EACHRS16E44201ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (EXPANSION)S0.00FTSS18E400006" PERFORATED CORRUGATED PLASTIC PIPE114.00FTSS18E400006" PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS30.00SYSS26E25001REINFORCED CONCRETE APPROACH SLABSIC (T=15"), AS PER PLAN209.00SYSS26E25001TYPE A INSTALLATION642.00SYUG07239901VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN742.00FTSG0120000CRUSHED AGGREGATE SLOPE PROTECTION642.00	511E34451	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN	137.00	CY	U
State of the second s	511E40512	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS	177.00	CY	S
S12E10100SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)I.I.S.S.3.00SYSS12E13000TYPE 2 WATERPROOFING30.00SYSS13E10240STRUCTURAL STEEL MEMBERS, LEVEL 2550,447.00LBUS13E20000WELDED STUD SHEAR CONNECTORS9,400.00EACHSS14E00060FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT31,801.00SFUS14E00066FIELD PAINTING STRUCTURAL STEEL, FINISH COAT31,801.00SFUS16E11210STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL85.00FTUS16E139002" PREFORMED EXPANSION JOINT FILLER79.00SFSS16E44001ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (FIXED)S.00EACHRS18E21200POROUS BACKFILL WITH GEOTEXTILE FABRIC89.00CYSS18E400016" PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS102.00FTSS18E400006" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS102.00FTSS26E25001REINFORCED CONCRETE APPROACH SLASS (T=15"), AS PER PLAN209.00SYSS26E00010TYPE A INSTALLATIONS3.00FTSG01E20000CRUSHED AGGREGATE SLOPE PROTECTIONG642.00SYUG07E39901VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN742.00FTSG25E33001STRUCTURE GROUNDING SYSTEM, AS PER PLAN10.00EACHS	511E44112	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	83.00	CY	S
S12E33000TYPE 2 WATERPROOFING30.00SYS513E10240STRUCTURAL STEEL MEMBERS, LEVEL 2550,447.00LBU513E20000WELDED STUD SHEAR CONNECTORS9,400.00EACHS514E00060FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT31,801.00SFU514E00066FIELD PAINTING STRUCTURAL STEEL, FINISH COAT31,801.00SFU516E1120STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL85.00FTU516E130002" PREFORMED EXPANSION JOINT FILLER79.00SFS516E44001ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (FIXED)S1.00EACHR518E21200POROUS BACKFILL WITH GEOTEXTILE FABRIC89.00CYSS518E400006" PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS102.00FTS518E400106" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS102.00FTS526E25001REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN209.00SYS526E25001TYPE A INSTALLATIONAS.00FTS601E20000CRUSHED AGGREGATE SLOPE PROTECTION642.00SYU607E39901VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN742.00FTS625E33001STRUCTURE GROUNDING SYSTEM, AS PER PLAN1.00EACHS625E33001STRUCTURE GROUNDING SYSTEM, AS PER PLAN1.00EACHS	511E46012	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING	43.00	СҮ	S
S13E10240STRUCTURAL STEEL MEMBERS, LEVEL 2S50,447.00LBUS13E10240WELDED STUD SHEAR CONNECTORS9,400.00EACHSS14E00060FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT31,801.00SFUS14E00066FIELD PAINTING STRUCTURAL STEEL, FINISH COAT31,801.00SFUS16E11210STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL85.00FTUS16E139002" PREFORMED EXPANSION JOINT FILLER79.00SFSS16E44001ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (FIXED)S100EACHRS16E44001ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (EXPANSION)S6SS16E44001ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (EXPANSION)S6RS18E21200POROUS BACKFILL WITH GEOTEXTILE FABRIC89.00CYSS18E400006" PERFORATED CORRUGATED PLASTIC PIPE114.00FTSS18E400006" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS100.00FTSS26E25001REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN209.00SYSS26E25001TYPE A INSTALLATIONS4JJJ601E20000CUSHED AGGREGATE SLOPE PROTECTIONAS PER PLAN742.00FTS601E20000CUSHED AGGREGATE SLOPE PROTECTIONS7SSSS601E20000CUSHED AGGREGATE SLOPE P	512E10100	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	1,553.00	SY	S
513E20000WELDED STUD SHEAR CONNECTORS9,400.00EACHS514E00060FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT31,801.00SFU514E00066FIELD PAINTING STRUCTURAL STEEL, FINISH COAT31,801.00SFU516E11210STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL85.00FTU516E139002" PREFORMED EXPANSION JOINT FILLER79.00SFS516E44001ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (FIXED)S.00EACHR516E44201ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (EXPANSION)S0.00EACHR516E44201ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (EXPANSION)S0.00EACHR516E44201ELASTOMERIC DEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (EXPANSION)S0.00EACHR518E40006" PERFORATED CORRUGATED PLASTIC PIPE114.00FTS518E400006" PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS102.00FTS526E25001REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN209.00SYS526E90010TYPE A INSTALLATION642.00SYU601E20000CRUSHED AGGREGATE SLOPE PROTECTION642.00SYU607E39901VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN742.00FTS625E33001STRUCTURE GROUNDING SYSTEM, AS PER PLAN1.00	512E33000	TYPE 2 WATERPROOFING	30.00	SY	S
514E00060FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT31,801.00SFU514E00066FIELD PAINTING STRUCTURAL STEEL, FINISH COAT31,801.00SFU516E11210STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL85.00FTU516E139002" PREFORMED EXPANSION JOINT FILLER79.00SFS516E44001ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (FIXED)8.00EACHR516E44201ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (EXPANSION)8.00CYS518E4200OROUS BACKFILL WITH GEOTEXTILE FABRIC89.00CYS518E40006" PERFORATED CORRUGATED PLASTIC PIPE114.00FTS518E400106" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS102.00FTS526E25001TYPE A INSTALLATION83.00FTS601E20000CRUSHED AGGREGATE SLOPE PROTECTION642.00SYU607E39901VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN1.00EACHS625E33001STRUCTURE GROUNDING SYSTEM, AS PER PLAN1.00EACHS	513E10240	STRUCTURAL STEEL MEMBERS, LEVEL 2	550,447.00	LB	U
S14E00066FIELD PAINTING STRUCTURAL STEEL, FINISH COATS1,000SFU514E00066FIELD PAINTING STRUCTURAL STEEL, FINISH COAT31,801.00SFU516E11210STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL85.00FTU516E139002" PREFORMED EXPANSION JOINT FILLER79.00SFS516E44001ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (FIXED)S1.00EACHR516E44201ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (EXPANSION)S1.00EACHR518E4200OROUS BACKFILL WITH GEOTEXTILE FABRIC89.00CYS518E40006" PERFORATED CORRUGATED PLASTIC PIPEINCLUDING SPECIALS100.00FTS518E40006" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS102.00FTS526E25001REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN209.00SYS526E90010TYPE A INSTALLATION642.00SYU601E20000CRUSHED AGGREGATE SLOPE PROTECTION642.00SYU607E39901VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN1.00EACHS6253001TYUCTURE GROUNDING SYSTEM, AS PER PLAN1.00EACHS	513E20000	WELDED STUD SHEAR CONNECTORS	9,400.00	EACH	S
516E11210STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL85.00FTU516E139002" PREFORMED EXPANSION JOINT FILLER79.00SFS516E44001ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (FIXED)5.00EACHR516E44201ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (EXPANSION)30.00EACHR516E44201CASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (EXPANSION)83.00CYS518E41200POROUS BACKFILL WITH GEOTEXTILE FABRIC89.00CYS518E400106" PERFORATED CORRUGATED PLASTIC PIPE114.00FTS518E400106" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS102.00FTS526E25001REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN209.00SYS526E90010TYPE A INSTALLATION642.00SYU601E20000CRUSHED AGGREGATE SLOPE PROTECTION642.00SYU607E39901VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN1.00EACHS62530013STUCTURE GROUNDING SYSTEM, AS PER PLAN1.00EACHS	514E00060	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	31,801.00	SF	U
S16E139002" PREFORMED EXPANSION JOINT FILLER79.00SFS516E139002" PREFORMED EXPANSION JOINT FILLER79.00SFS516E44001ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (FIXED)5.00EACHR516E44201ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (EXPANSION)30.00EACHR518E21200POROUS BACKFILL WITH GEOTEXTILE FABRIC89.00CYS518E400106" PERFORATED CORRUGATED PLASTIC PIPE114.00FTS518E400106" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS1002.00FTS526E25001REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN209.00SYS526E90010TYPE A INSTALLATIONSSSS601E20000CRUSHED AGGREGATE SLOPE PROTECTION642.00SYU607E39901VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN742.00FTS625E33001STRUCTURE GROUNDING SYSTEM, AS PER PLAN1.00EACHS	514E00066	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	31,801.00	SF	U
51000000000000000000000000000000000000	516E11210	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL	85.00	FT	U
516E44001PER PLAN (FIXED)5.00EACHR516E44201ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (EXPANSION)30.00EACHR518E21200POROUS BACKFILL WITH GEOTEXTILE FABRIC89.00CYS518E400006" PERFORATED CORRUGATED PLASTIC PIPE114.00FTS518E400106" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS1002.00FTS526E25001REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN209.00SYS526E90010TYPE A INSTALLATION83.00FTS601E20000CRUSHED AGGREGATE SLOPE PROTECTION642.00SYU607E39901VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN742.00FTS625E33001STRUCTURE GROUNDING SYSTEM, AS PER PLAN1.00EACHS	516E13900	2" PREFORMED EXPANSION JOINT FILLER	79.00	SF	S
S16E44201PER PLAN (EXPANSION)EACHR518E21200POROUS BACKFILL WITH GEOTEXTILE FABRIC89.00CYS518E400006" PERFORATED CORRUGATED PLASTIC PIPE114.00FTS518E400106" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS102.00FTS526E25001REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN209.00SYS526E90010TYPE A INSTALLATION83.00FTS601E20000CRUSHED AGGREGATE SLOPE PROTECTION642.00SYU607E39901VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN742.00FTS625E33001STRUCTURE GROUNDING SYSTEM, AS PER PLAN1.00EACHS	516E44001		5.00	EACH	R
518E400006" PERFORATED CORRUGATED PLASTIC PIPE114.00FTS518E400106" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS102.00FTS526E25001REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN209.00SYS526E90010TYPE A INSTALLATION83.00FTS601E20000CRUSHED AGGREGATE SLOPE PROTECTION642.00SYU607E39901VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN742.00FTS625E33001STRUCTURE GROUNDING SYSTEM, AS PER PLAN1.00EACHS	516E44201		30.00	EACH	R
518E400106" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS102.00FTS526E25001REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN209.00SYS526E90010TYPE A INSTALLATION83.00FTS601E20000CRUSHED AGGREGATE SLOPE PROTECTION642.00SYU607E39901VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN742.00FTS625E33001STRUCTURE GROUNDING SYSTEM, AS PER PLAN1.00EACHS	518E21200	POROUS BACKFILL WITH GEOTEXTILE FABRIC	89.00	CY	S
526E25001REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN209.00SYS526E90010TYPE A INSTALLATION83.00FTS601E20000CRUSHED AGGREGATE SLOPE PROTECTION642.00SYU607E39901VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN742.00FTS625E33001STRUCTURE GROUNDING SYSTEM, AS PER PLAN1.00EACHS	518E40000	6" PERFORATED CORRUGATED PLASTIC PIPE	114.00	FT	S
526E90010TYPE A INSTALLATION83.00FTS601E20000CRUSHED AGGREGATE SLOPE PROTECTION642.00SYU607E39901VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN742.00FTS625E33001STRUCTURE GROUNDING SYSTEM, AS PER PLAN1.00EACHS	518E40010	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	102.00	FT	S
601E20000CRUSHED AGGREGATE SLOPE PROTECTION642.00SYU607E39901VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN742.00FTS625E33001STRUCTURE GROUNDING SYSTEM, AS PER PLAN1.00EACHS	526E25001	REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN	209.00	SY	S
607E39901 VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN 742.00 FT S 625E33001 STRUCTURE GROUNDING SYSTEM, AS PER PLAN 1.00 EACH S	526E90010	TYPE A INSTALLATION	83.00	FT	S
625E33001 STRUCTURE GROUNDING SYSTEM, AS PER PLAN 1.00 EACH S	601E20000	CRUSHED AGGREGATE SLOPE PROTECTION	642.00	SY	U
	607E39901	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN	742.00	FT	S
846E00111 POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM, AS PER PLAN 35.00 CF	625E33001	STRUCTURE GROUNDING SYSTEM, AS PER PLAN	1.00	EACH	S
	846E00111	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM, AS PER PLAN	35.00	CF	



<u> </u>		PROJECT	PHASE	ORG
COMPLETED BY:	CAE	74567	0	0
CHECKED BY:	DOR	SHEET #: 2 OF	38	
PROJECT NAME:	LAK-6-2.06	DATE: 3/4/2025		
PROJECT LOCATION:	Willoughby Hills (LAK County)	SUBJECT: Quantity Calco	ulations	
202E11203 PORTION	NS OF STRUCTURE REMOVED, OVER 20 FOOT S	SPAN, AS PER PLAN T	OTAL: 1	.00 LS

Based on Deck Area

Total Deck Area = 17858.0 sf Total = \$813,102

\$/sf = \$45.5



		PROJECT	PHASE		ORG
COMPLETED BY:	CAE	74567	0		0
CHECKED BY:	DOR	SHEET #: 3 OF	38		
PROJECT NAME:	LAK-6-2.06	DATE: 3/4/2025			
PROJECT LOCATION:	Willoughby Hills (LAK County)	SUBJECT: Quantity Calc	ulations		
202E22900 APPROA	CH SLAB REMOVED	Т	OTAL:	167.00	SY

Forward Approach Slab Area = 751 sf Rear Approach Slab Area = 750.86 sf Total = 1501.9 sf

= 167 sy

COMPLETED BY: CAE					74567		0		0
CHECKED BY: DOR				SHEET #:	4	OF	38		
PROJECT NAME: LAK-6-2.06				DATE:	3/4/2025				
PROJECT LOCATION: Willoughby Hills (I	AK	County)		SUBJECT:	Quantity	Calculati	ons		
03E21100 UNCLASSIFIED EXCAVATIO	N					ΤΟΤΑ	L:	329.00	СҮ
a. Behind Abutment									
Depth of Excavation	=	9.22	ft						
Additional Length to Excavation	=	1.5	ft						
Abutment Width	=	39.255	ft						
Excavation Cross-Sectional Area	=	56.326	sft						
Volume per Abutment	=	2211.1	cft						
	=	81.892	су						
b. In Front of Abutment									
Assumed Depth of Excavation	=	3	ft						
Length of Excavation	=	43.255	ft						
Excavation Cross-Sectional Area	=	4.5	sft						
Volume per Abutment	=	194.65	cft						
	=	7.2092	су						
c. Behind and Infront of wingw	vall								
Length of Wingwall	=	17	ft						
Wingwall Height	=	9.2192	ft						
Additional Length to Excavation	=	1.5	ft						
					Grand to	tal =	329	су	
excavation Cross-Sectional End Area	=	56.326	sft						
Volume per Wingwall	=	319.18	cft	(This volume is	assumed	to lap wi	th the vo	olume behi	nd the
	=	11.822	су	abutment. So, tl	nis <mark>over</mark> lap	deals w	ith the s	oil on the o	outside.

= 185.86 cft Per Column

Number of Columns = 15 Total = 2787.9 cft



	PROJECT	PHASE	ORG
COMPLETED BY: CAE	74567	0	0
CHECKED BY: DOR	SHEET #: 5 C	OF 38	
PROJECT NAME: LAK-6-2.06	DATE: 3/4/2025		
PROJECT LOCATION: Willoughby Hills (LAK County)	SUBJECT: Quantity Ca	alculations	
509E10000 EPOXY COATED REINFORCING STEEL		TOTAL: 209,	334.00 LB
Deck	:	143777.00 lbs	
Abutment and Wingwall		12238.00 lbs	
Pier		38042.00 lbs	
Railing		15277.00 lbs	
	Total =	209334.00 lbs	



		PROJECT	PHASE	ORG
COMPLETED BY:	CAE	74567	0	0
CHECKED BY:	DOR	SHEET #: 6 OF	38	
PROJECT NAME:	LAK-6-2.06	DATE: 3/4/2025		
PROJECT LOCATION:		SUBJECT: Quantity Calo	culations	
1509F20001	TE REINFORCEMENT, REPLACEMENT OF EXIS RCEMENT, AS PER PLAN	TING CONCRETE	TOTAL: 1,0	000.00 LB

Total from general notes = 1000 lbs



	PROJECT PHASE	ORG
COMPLETED BY: CAE	74567 0	0
CHECKED BY: DOR	SHEET #: 7 OF 38	
PROJECT NAME: LAK-6-2.06	DATE: 3/4/2025	
PROJECT LOCATION:	SUBJECT: Quantity Calculations	
509E25000 UNCOATED STEEL REINFORCEMENT	TOTAL:	1,600.00 LB

A518 BAR	=	245	LB
A604 BAR	=	1298	LB
A527 BAR	=	44	LB
A528 BAR	=	13	LB

TOTAL = 1600 LB



— — — —		PROJECT	PHASE		ORG
COMPLETED BY:	CAE	74567	0		0
CHECKED BY:	DOR	SHEET #: 8 OF	38		
PROJECT NAME:	LAK-6-2.06	DATE: 3/4/2025			
PROJECT LOCATION:		SUBJECT: Quantity Calc	ulations		
509E30020 NO. 4 DE	FORMED GRFP REINFORCEMENT	т	OTAL:	13,528.00	FT

From Rebar Calcs = 13528 ft



		1	PROJECT	PHASE		ORG
COMPLETED BY:	CAE		74567	0		0
CHECKED BY:	DOR	SHEET #	: 9 0	OF 38		
PROJECT NAME:	LAK-6-2.06	DATE	: 3/4/2025			
PROJECT LOCATION:	Willoughby Hills (LAK County)	SUBJECT	: Quantity Ca	alculations		
510E10001 DOWEL	HOLES WITH NONSHRINK, NONMETALLIC GROU	JT, AS PER F	PLAN	TOTAL:	216.00	EACH

- Number of A518 bars = 54 Number of A604 bars = 162
- Total Number of Dowels = 216

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COMPLETED BY: CAE							PROJECT 75926			IASE 0	1	0
									38	<u>י</u> ר		U
CHECKED BY: DOR					SHEI			OF	30			
PROJECT NAME: LAK-6-2.06		()					3/4/2025					
ROJECT LOCATION: Willoughby Hill					SUBJ	ECT	Quantity					
1E34446 CLASS QC2 CONCRETE	WITH QC/	QA, BRIDGE	E DE(CK				Т	OTAL:		525.00	CY
Interior Deck												
Bridge Deck Thickness		50 in	=	0.7	1	ft						
Width	= 28	.68 ft										
Bridge Floor Length	= 490	0.00 ft										
Total = 490.00	x 28	.68 x		0.71	=	9	9955.51	cft				
<u>Overhang Deck</u>												
Bridge Deck Thickness	= 11.	875 in	=	0.9	9	ft						
Total Width	= 7.	98 ft										
Bridge Floor Length	= 490	0.00 ft										
Total = 490.00	x 7.	98 x		0.99	=	3	3871.05	cft				
Total = 490.00	x 7.	98 x		0.99	=	ŝ	3871.05	cft				
Total = 490.00 <u>Haunch</u>	x 7.	98 x		0.99	=		3871.05	cft				
		98 x 126 in	=	0.99		ft	3871.05	cft				
<u>Haunch</u>	= 2		=		8		3871.05	cft				
<u>Haunch</u> Average Haunch Thickness	= 2.: = 15	126 in		0.1	8	ft	3871.05	cft				
<u>Haunch</u> Average Haunch Thickness Haunch Width	= 2 = 15 = 66	126 in .80 in		0.1	8	ft	3871.05	cft				
<u>Haunch</u> Average Haunch Thickness Haunch Width Span 1 Beam Length	= 2 = 15 = 66 = 92	126 in .80 in .05 ft		0.1	8	ft	3871.05	cft				
<u>Haunch</u> Average Haunch Thickness Haunch Width Span 1 Beam Length Span 2 Beam Length	= 2.: = 15 = 66 = 92 = 84	126 in .80 in .05 ft .00 ft		0.1	8	ft	3871.05	cft				
Haunch Average Haunch Thickness Haunch Width Span 1 Beam Length Span 2 Beam Length Span 3 Beam Length	= 2 = 15 = 66 = 92 = 84 = 84	126 in .80 in .05 ft .00 ft .00 ft		0.1	8	ft	3871.05	cft				
Haunch Average Haunch Thickness Haunch Width Span 1 Beam Length Span 2 Beam Length Span 3 Beam Length Span 4 Beam Length	= 2 = 15 = 66 = 92 = 84 = 84 = 95	126 in .80 in .05 ft .00 ft .00 ft		0.1	8	ft	3871.05	cft				
Haunch Average Haunch Thickness Haunch Width Span 1 Beam Length Span 2 Beam Length Span 3 Beam Length Span 4 Beam Length Span 5 Beam Length	= 2.: = 15 = 66 = 92 = 84 = 84 = 95 = 69	126 in .80 in .05 ft .00 ft .00 ft .00 ft .25 ft		0.1	8	ft	3871.05	cft				
Haunch Average Haunch Thickness Haunch Width Span 1 Beam Length Span 2 Beam Length Span 3 Beam Length Span 4 Beam Length Span 5 Beam Length Span 6 Beam Length	= 2 = 15 = 66 = 92 = 84 = 84 = 95 = 69 = 490	126 in .80 in .05 ft .00 ft .00 ft .25 ft .05 ft		0.1	8	ft	3871.05	cft				



					Р	ROJECT	PHASE		ORG
COMPLETED BY: CAE						74567	0		0
CHECKED BY: DOR					SHEET #:	11 OF	- 38		
PROJECT NAME: LAK-6-2.06					DATE:	3/4/2025			
PROJECT LOCATION: Willoughby H	ills (LAK Coun	ity)		:	SUBJECT:	Quantity Cal	culations		
511E34451 CLASS QC2 CONCRET PLAN	E WITH QC/QA	A, BRI	DGE	DECK (PARA	APET), AS F	PER	TOTAL:	137.00	СҮ
<u>SBR-3 Concrete Rail</u>									
Concrete Height =	3.00	ft							
Concrete Top Width =	0.83	ft							
Concrete Bottom Width =	1.50	ft				*Extra at En	ds on Approad	ch Slab	
Rail Length =	490.00	ft	+	490.00	ft +	16.6145	ft = 9	996.61 f	t
Total =	3488.15	cft	=	129.19	CVS				
SBR-3 Transition									
Concrete Volume =	1.74	cys		(Standa	ard Bridge	Drawing SBR	-3-20)		
No. of Transition =	3.00	,			0	0	,		
Total =	5.22	cys							
Total =	5.22	Cys							
Impact Attenuator Transit									
Transition Volume =	1.74	cys				c			
SBR-3 C to E Volume =	0.46	cys		Averag	e end area	for sections	between L and	d N on Plan	S
Concrete Block Volume =	0.48	cys							
Combined =	1.76	cys		Transit	ion - C to E	E + Block			
Total Volume = 1	.29.19 cys	+		5.22 cys	s +	1.76 cys	5		
= 1	.37.00 cys								

		PF	ROJECT	PHASE		ORG	
COMPLETED BY:	CAE	7	74567	0		0	
CHECKED BY:	DOR	SHEET #:	12 OF	38			
PROJECT NAME:	LAK-6-2.06	DATE:	3/4/2025				
PROJECT LOCATION:	Willoughby Hills (LAK County)	SUBJECT:	Quantity Calc	ulations			
511E40512 CLASS (QC1 CONCRETE WITH QC/QA, PIER ABOVE FOO	TINGS	т	OTAL:	177.00	СҮ	

<u>Columns</u>

CHV.

Pier 1 Height	=	: 17	7.96	ft		(ELEV F - ELEV G + 3')
Pier 2 Height	=	: 18	3.66	ft		
Pier 3 Height	=	: 20	0.00	ft		
Pier 4 Height	=	- 18	3.31	ft		
Pier 5 Height	=	: 17	7.09	ft		
Column Width	=	: 3	3.5	ft		
Volume =		98.4	су			
<u>Pier Cap</u>						
Pier 1 Cap Heigh	t	=	3	.16	ft	
Pier 2 Cap Heigh	t	=	3	.19	ft	
Pier 3 Cap Heigh	t	=	3	.22	ft	
Pier 4 Cap Heigh	t	=	3	.05	ft	
Pier 5 Cap Heigh	t	=	3	.28	ft	
Top Area =		14.81	sy			
Volume =		78.5	су			
Total =		177	су			



		PROJECT	PHASE	ORG
COMPLETED BY:	CAE	74567	0	0
CHECKED BY:	DOR	SHEET #: 13 OF	38	
PROJECT NAME:	LAK-6-2.06	DATE: 3/4/2025		
PROJECT LOCATION:	Willoughby Hills (LAK County)	SUBJECT: Quantity Calc	ulations	
511E44112 CLASS G	C1 CONCRETE WITH QC/QA, ABUTMENT NOT	NCLUDING FOOTING T	OTAL: 83	3.00 CY

Rear Abutment

			Corner Back	wall	
Average Abutment Height	= 9.08	ft	Length =	2.50 ft	(Each Side)
Average Stem Height	= 4.75	ft			
Average Backwall Height	= 4.32	ft	Volume =	75.057 cf	
Backwall Area = 6.94	sft		Corner Fillet	t	
Stem Area = 18.828	sft		Top area	= 2.33	sf (Measured in CAD)
			Height	= 2.57	ft (6" below app slab seat)
Length of Abutment =	39.255 ft				
			Volume	= 6.0	cf
Volume = 1092.7	cft				
= 40.5	су				

Forward Abutment

				Corner Back	wall		
Average Abutment Height	= 9	9.36	ft	Length =	2.50	ft	(Each Side)
Average Stem Height	= 5	5.05	ft				
Average Backwall Height	= 4	4.31	ft	Volume =	77.529	cf	
Backwall Area = 6.91	sft			Corner Fillet			
Stem Area = 20.03	sft			Top area	= 2	2.33	sf (Measured in CAD)
				Height	= 2	2.56	ft (6" below app slab seat)
Length of Abutment =	39.255 ft						
				Volume	=	6.0	cf
Volume = 1141.0	cft						
= 42.3	су						

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CHA COMPUTATION PAD

<u> </u>		PROJECT	PHASE	ORG
COMPLETED BY:	CAE	74567	0	0
CHECKED BY:	DOR	SHEET #: 14 OF	38	
PROJECT NAME:	LAK-6-2.06	DATE: 3/4/2025		
PROJECT LOCATION:	Willoughby Hills (LAK County)	SUBJECT: Quantity Cal	culations	
511E46012 CLASS C FOOTING	C1 CONCRETE WITH QC/QA, RETAINING/WING	WALL NOT INCLUDING	TOTAL: 4	3.00 CY

<u>Wingwall</u>

Side Area				Block Area		
Rear Left	=	128.28	sf	Rear Left	=	46.706 sf
Rear Right	=	124.53	sf	Rear Right	=	43.103 sf
Forward Left	=	123.87	sf	Forward Left	=	43.772 sf
Forward Right	=	128.5	sf	Forward Right	=	52.689 sf
Side Thickness	=	1.5	ft	Block Thickness	=	2 ft

Fillet Volumes			
Rear Left	=	11.096 cf	
Forward Right	=	11.796 cf	:

Volume per Wingwall

Rear Left	=	296.92	cf		
Rear Right	=	= 273.01 c			
Forward Left	=	273.34	cf		
Forward Right	=	309.93	cf		
Total	=	1153.2	cf		
	=	43	су		

COMPLETED BY: CAE			PROJECT 74567	PHASE 0	ORG 0
CHECKED BY: DOR			SHEET #: 15 0		
PROJECT NAME: LAK-6-2.06			DATE: 3/4/2025		
PROJECT LOCATION: Willoughby Hills (LAK	County)		SUBJECT: Quantity Cal	culations	
512E10100 SEALING OF CONCRETE SURF.		DXY-U		TOTAL:	1,553.00 SY
Sealing of Railing on Brid	ge		Sealing of Railing for BTA	(Conservative	
Height of Railing =	3	ft	Height of Railing =	3 ft	
Slanted Face =	3.0542	ft	Slanted Face =	3.0542 ft	
Top of Railing =	0.9271	ft	Top of Railing =	0.9271 ft	
Deck Thickness =	0.9167	ft	Deck Lip =	0.1667 ft	
Deck Lip =	0.1667	ft			
Under Deck Limit =	0.5	ft	Sum =	7.148 ft	
Sum =	8.5646	ft	Total Length of Railing BTA =	53.313 ft	
			Impact Block Railing Total =	175.79 sf	
Total Length of Railing =	980.33	ft			
Subtotal =	8396.2	sf	Subtotal =	556.87 sf	
Sealing of Abutments			Sealing of Wingwalls		
Height of slope below Beam Seat =	1	ft	Average Height =	2.745 ft	(Beamseat to 0)
Beam Seat Width =	2.25	ft	Length of Wingwall =	17 ft	
Backwall Height - Joint =	3.9067	ft	Odd Wingwall =	15.917 ft	
Length of Beamseat =	39.167	ft	Side Area of Wingwalls =	183.69 sf	
Area of Abutment on Beamseat =	280.3	sf			
			Width Face of Wingwall =	1.5 ft	
Length of Side of Beamseat =	5.2547	ft	Height of Abut. and Below =	5.49 ft	
Area of Beamseat Sides =	5.2547	sf	Number of Wingwalls =	4	
			Face of Abutment Area =	32.94 sf	
Length of Rest of Abutment =	3.8272	ft			
Area of Rest of Abutment =	18.779	sf	Subtotal =	216.63 sf	
	204.24				
Area of Single Abutment =	304.34	st	Sealing of Piers	10.40	
Number of Abutments =	2		Average Column Height =	18.40 ft	
Subtotal =	608.67	st	Average Soil Height =	4.00 ft	(Conservative)
			Circumference of Column =	10.996 ft	
		_	Pier Cap Perimeter =	81.662 ft	
Total =	13975		Average Pier Cap Height =	3.18 ft	
=	1553	sy	Top Area =	133.29 sf	
			Bottom Area =	104.42 sf	

Subtotal = 4196.7 sf

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		PROJECT	PHASE	ORG	
COMPLETED BY:	CAE	74567	0	0	
CHECKED BY:	DOR	SHEET #: 16 OF	38		
PROJECT NAME:	LAK-6-2.06	DATE: 3/4/2025			
PROJECT LOCATION:	Willoughby Hills (LAK County)	SUBJECT: Quantity Calc	ulations		
512E33000 TYPE 2 W	ATERPROOFING	١	OTAL: 30	0.00 SY	

Height	=	3	ft
Width of abutment backwall	=	43.573	ft
One Abutment	=	130.72	ft
Total	=	261.44	ft
	=	29.049	sy

COMPLETED BY: CA	E						ROJECT 74567		IASE	ORG 0
CHECKED BY: DO					SHEE	т #:	17 OF	38	1	
PROJECT NAME: LA							3/4/2025		-	
PROJECT LOCATION: Wi	lloughby Hil	ls (L	AK County)				Quantity Calcu	lations		
513E10240 STRUCTURA	AL STEEL M	EMB	ERS, LEVEL 2				Т	OTAL:	550,447	LB
<u>Beam</u>										
					Beam Used		Weight (lbs/f	t)	Beam Weigh	t (lbs)
(Add 0.5 ft on end)	Span 1	=	66.05	ft	W40x199		199		13144	
	Span 2	=	92.00	ft	W40x199		199		18308	
	Span 3	=	84.00	ft	W40x199		199		16716	
	Span 4	=	84.00	ft	W40x199		199		16716	
	Span 5	=	95.25	ft	W40x199		199		18955	
(Add 0.5 ft on end)	Span 6	=	69.05	ft	W40x199		199		13741	
							Total We	ight =	97580	lbs
No. of Be	ams Lines	=	5.00							
		=	487902.4	lb						
<u>Cross Frame</u>					<u>Stru</u>	<u>t</u>	Charle Charl		12 5.2 5.2 0	
			L3.5x3.5x3/8			Mai	ght per linear		L3.5x3.5x3/8	
Weight per l			8.5 29.412	lb/ft ft		vvei	Length of S		8.5 14.538	lb/ft ft
Length of Cro			29.412	ιι				trut =	14.330	
Total Number of Cro	cc Eramoc	- 1	72 00		т	otal	-		62.00	i c
Total Number of Cro	oss Frames	=	72.00		Т	otal	Number of St		62.00	it.
Total Number of Cro <u>Skewed Crossfro</u>		=	72.00				-		62.00	it.
Skewed Crossfro			72.00 L4x4x1/2				Number of St	ruts =	62.00 L4x4x3/8	i.
Skewed Crossfro	a <u>me</u> eel Section	=		lb/ft	<u>End</u>	<u>Dia</u>	Number of St	ruts = tion =		lb/ft
<u>Skewed Crossfro</u> Ste	<u>ame</u> eel Section linear foot	=	L4x4x1/2	lb/ft	<u>End</u>	<u>Dia</u>	Number of St <u>ohragm</u> Steel Sec	ruts = tion = foot =	L4x4x3/8	
<u>Skewed Crossfro</u> Ste Weight per l	<u>ame</u> eel Section linear foot oss Frames	= = =	L4x4x1/2 12.80	lb/ft	<u>End</u>	<u>Dia</u>	l Number of St <u>phragm</u> Steel Sec ght per linear f	ruts = tion = foot = gles =	L4x4x3/8 9.80	
<u>Skewed Crossfro</u> Ste Weight per I Number of Skewed Cro	<u>ame</u> eel Section linear foot oss Frames	= = =	L4x4x1/2 12.80 20.00	lb/ft	<u>End</u>	<u>Dia</u>	l Number of St <u>ohragm</u> Steel Sec ght per linear t Length of An	ruts = tion = foot = gles =	L4x4x3/8 9.80 23.01	
<u>Skewed Crossfro</u> Ste Weight per I Number of Skewed Cro	<u>ame</u> eel Section linear foot oss Frames	= = =	L4x4x1/2 12.80 20.00	lb/ft	<u>End</u>	<u>Dia</u>	l Number of St <u>ohragm</u> Steel Sec ght per linear t Length of An	ruts = tion = foot = gles =	L4x4x3/8 9.80 23.01	
<u>Skewed Crossfro</u> Ste Weight per I Number of Skewed Cro	a <u>me</u> eel Section linear foot oss Frames h Increase	= = =	L4x4x1/2 12.80 20.00	lb/ft ft x	<u>End</u>	<u>Dia</u> Wei	l Number of St <u>ohragm</u> Steel Sec ght per linear f Length of An wed Cross Fran	ruts = tion = foot = gles =	L4x4x3/8 9.80 23.01	
<u>Skewed Crossfro</u> Ste Weight per I Number of Skewed Cro Assumed Lengt	a <u>me</u> eel Section linear foot oss Frames h Increase	= = =	L4x4x1/2 12.80 20.00 34.64 29.412		<u>End</u> Number of	<u>Dia</u> Wei	bl Number of St <u>ohragm</u> Steel Sec ght per linear f Length of An wed Cross France p/ft x 7	ruts = tion = foot = gles = mes = 72.00	L4x4x3/8 9.80 23.01	
<u>Skewed Crossfro</u> Ste Weight per I Number of Skewed Cro Assumed Lengt	a <u>me</u> eel Section linear foot oss Frames h Increase	= = =	L4x4x1/2 12.80 20.00 34.64 29.412	ft x	<u>End</u> Number of 8.5 ft x	<u>Dia</u> Wei Ske	of the second state of the	ruts = foot = gles = mes = 72.00 x	L4x4x3/8 9.80 23.01 8.00	
<u>Skewed Crossfro</u> Ste Weight per I Number of Skewed Cro Assumed Lengt	a <u>me</u> eel Section linear foot oss Frames h Increase	= = =	L4x4x1/2 12.80 20.00 34.64 29.412 + 1	ft x 4.538 23.00	<u>End</u> Number of 8.5 ft x	<u>Dia</u> Wei Ske Ib 8.5	l Number of St <u>phragm</u> Steel Sec ght per linear f Length of An wed Cross Fran p/ft x 7 lb/ft	ruts = foot = gles = mes = 72.00 x	L4x4x3/8 9.80 23.01 8.00	lb/ft

Adding 5% for connections and splice

Total weight = 550,447 lb

CHA

C	K

			PROJECT	PHASE		ORG
COMPLETED BY:	CAE		74567	0		0
CHECKED BY:	DOR	S	SHEET #: 18 OF	38		
PROJECT NAME:	LAK-6-2.06		DATE: 3/4/2025			
PROJECT LOCATION:	Willoughby Hills (LAK County)	รเ	JBJECT: Quantity Calc	ulations		
513E20000 WELDED	STUD SHEAR CONNECTORS		т	OTAL:	9,400.00	EACH

ea.

ea.

Shear stud connector per beam line

(From Shear Stud Calculations)

Total Beam Lines

= 5 = 9400

Total

=

1880



								PF	ROJECT			PHASE			ORG
COMPLETED BY:	CAE							7	74567			0			0
CHECKED BY:	DOR						SHEE	T #:	19	OF		38			
PROJECT NAME:	LAK-	6-2.06					D	ATE:	3/4/2025						
PROJECT LOCATION:	Willo	ughby H	ills (LAK Co	unty)			SUBJE	ECT:	Quantity (Calcu	latio	ns			
514E00060 FIELD PA		IG STRU	CTURAL ST	EEL, INTE	RMEDI	ATE COA	AT			т	DTAL	:	31,8	01.00	SF
<u>Beam</u>															
For W40)x199														
h	=	38.70	in												
w	=	15.80	in												
tw	=	0.65	in												
tf	=	1.07	in												
*Painting region	=	10.29	ft												
*(top flange widt	h not	conside	red for pair	nting)											
Span 1 Bear	m Len	gth =	66.05	ft											
Span 2 Bear	m Len	gth =	92.00	ft											
Span 3 Bear	m Len	gth =	84.00	ft											
Span 4 Bear	m Len	gth =	84.00	ft											
Span 5 Bear	m Len	gth =	95.25	ft											
Span 6 Bear	m Len	gth =	69.05	ft											
Tota	al Len	gth =	490.354	ft											
No. of Beams	per S	pan =	5.00												
Surf	face A	rea =	10.29	ft	x	490.35	ft	х	5.00						
		=	25232.8	sf											
<u>Framing</u>															
For L3.5	x3.5x3	3/8		For L4	x4x3/8	3			For L	_4x4x	:1/2				
h	=	3.50	in	h	=	4.0	in			h	=	4.0	in		
w	=		in	W	/ =	4.00	in			w	-	4.00	in		
tw	=		in		N =	0.38				tw	-	0.50			
tf	=	0.38		tí		0.38				tf	-	0.50			
Painting region		1.17		iting regi				Pa	inting reg			1.33			
Length			020 ft						Len			692.7		ft	
Surface Area				Leng	=			sf		5.11	-	923.		sf	
Surface Area	_	5522.	10 21		-	243.	.+0	51			-	923.	02	51	

Adding 40% to Framing for connections plates and Splice

Total Surface Area = 31,801.00 sf



		PROJECT	PHASE		ORG
COMPLETED BY:	CAE	74567	0		0
CHECKED BY:	DOR	SHEET #: 20 OF	38		
PROJECT NAME:	LAK-6-2.06	DATE: 3/4/2025			
PROJECT LOCATION:	Willoughby Hills (LAK County)	SUBJECT: Quantity Calcu	ulations		
514E00066 FIELD PA	AINTING STRUCTURAL STEEL, FINISH COAT	Т	OTAL:	31,801.00	EACH



			PROJECT	PHASE		ORG
COMPLETED BY:	CAE		74567	0		0
CHECKED BY:	DOR	S	HEET #: 21 OF	38		
PROJECT NAME:	LAK-6-2.06		DATE: 3/4/2025			
PROJECT LOCATION:	Willoughby Hills (LAK County)	SL	IBJECT: Quantity Calc	ulations		
516E11210 STRUCT	URAL EXPANSION JOINT INCLUDING ELASTOMI	ERIC	STRIP SEAL T	OTAL:	85.00	FT

Forward Abut = 42.281 ft

Rear Abut = 42.281 ft



		PROJECT	PHASE		ORG	
COMPLETED BY:	CAE	74567	0		0	
CHECKED BY:	DOR	SHEET #: 22 OF	38			
PROJECT NAME:	LAK-6-2.06	DATE: 3/4/2025				
PROJECT LOCATION:	Willoughby Hills (LAK County)	SUBJECT: Quantity Calco	ulations			
516E13900 2" PREF	ORMED EXPANSION JOINT FILLER	т	OTAL:	79.00	SF	

Wingwall and Approach Slab Lengths

15.748	ft	
15.269	ft	
15.269	ft	
16.54	ft	
62.823	ft	
1.25	ft	(Approach slab thickness)
	15.269 15.269 16.54 62.823	16.54 ft

Total = 79 sf



		PROJECT	PHASE		ORG
COMPLETED BY:	CAE	74567	0		0
CHECKED BY:	DOR	SHEET #: 23 0	F 38		
PROJECT NAME:	LAK-6-2.06	DATE: 3/4/2025			
PROJECT LOCATION:	Willoughby Hills (LAK County)	SUBJECT: Quantity Ca	lculations		
1516F44001	MERIC BEARING WITH INTERNAL LAMINATES A ENE), AS PER PLAN (FIXED)	ND LOAD PLATE	TOTAL:	5.00	EACH

Total Beam Lines = 5



		PI	ROJECT	PHASE		ORG
COMPLETED BY:	CAE		74567	0		0
CHECKED BY:	DOR	SHEET #:	24 OF	38		
PROJECT NAME:	LAK-6-2.06	DATE:	3/4/2025			
PROJECT LOCATION:	Willoughby Hills (LAK County)	SUBJECT:	Quantity Calcu	ulations		
1516F44201	MERIC BEARING WITH INTERNAL LAMINATES A ENE), AS PER PLAN (EXPANSION)	ND LOAD PLA	те т	OTAL:	5.00	EACH

Total Beam Lines



		PROJECT	PHASE		ORG
COMPLETED BY:	CAE	74567	0		0
CHECKED BY:	DOR	SHEET #: 25 OF	38		
PROJECT NAME:	LAK-6-2.06	DATE: 3/4/2025			
PROJECT LOCATION:	Willoughby Hills (LAK County)	SUBJECT: Quantity Calo	ulations		
1516F44201	MERIC BEARING WITH INTERNAL LAMINATES A ENE), AS PER PLAN (EXPANSION)	ND LOAD PLATE .	FOTAL:	5.00	EACH

Total Beam Lines



		PROJECT	PHASE		ORG
COMPLETED BY:	CAE	74567	0		0
CHECKED BY:	DOR	SHEET #: 26 OF	- 38		
PROJECT NAME:	LAK-6-2.06	DATE: 3/4/2025			
PROJECT LOCATION:	Willoughby Hills (LAK County)	SUBJECT: Quantity Cal	culations		
1516F44201	MERIC BEARING WITH INTERNAL LAMINATES A ENE), AS PER PLAN (EXPANSION)	ND LOAD PLATE	TOTAL:	5.00	EACH

Total Beam Lines



		PROJECT	PHASE		ORG
COMPLETED BY:	CAE	74567	0		0
CHECKED BY:	DOR	SHEET #: 27 OF	38		
PROJECT NAME:	LAK-6-2.06	DATE: 3/4/2025			
PROJECT LOCATION:	Willoughby Hills (LAK County)	SUBJECT: Quantity Calc	ulations		
516F44201	MERIC BEARING WITH INTERNAL LAMINATES A ENE), AS PER PLAN (EXPANSION)	IND LOAD PLATE	TOTAL:	5.00	EACH

Total Beam Lines



		PROJECT	PHASE		ORG
COMPLETED BY:	CAE	74567	0		0
CHECKED BY:	DOR	SHEET #: 28 OF	38		
PROJECT NAME:	LAK-6-2.06	DATE: 3/4/2025			
PROJECT LOCATION:	Willoughby Hills (LAK County)	SUBJECT: Quantity Calc	ulations		
1516F44201	MERIC BEARING WITH INTERNAL LAMINATES A ENE), AS PER PLAN (EXPANSION)	IND LOAD PLATE	OTAL:	5.00	EACH

Total Beam Lines



		PI	ROJECT	PHASE		ORG
COMPLETED BY:	CAE		74567	0		0
CHECKED BY:	DOR	SHEET #:	29 OF	38		
PROJECT NAME:	LAK-6-2.06	DATE:	3/4/2025			
PROJECT LOCATION:	Willoughby Hills (LAK County)	SUBJECT:	Quantity Calco	ulations		
1516F44201	MERIC BEARING WITH INTERNAL LAMINATES A ENE), AS PER PLAN (EXPANSION)	ND LOAD PLA	ТЕ Т	OTAL:	5.00	EACH

Total Beam Lines



	PROJECT	PHASE		ORG
COMPLETED BY: CAE	74567	0		0
CHECKED BY: DOR	SHEET #: 30 OF	38		
PROJECT NAME: LAK-6-2.06	DATE: 3/4/2025			
PROJECT LOCATION: Willoughby Hills (LAK County)	SUBJECT: Quantity Calcu	Ilations		
518E21200 POROUS BACKFILL WITH GEOTEXTILE FABRIC	Т	OTAL:	89.00	СҮ

Abutments

Total Top area = 148.49	sf						
Top area of Wingwall Blocks	=	31.989	sf	Height of Wingwall Block	=	4.90	ft
Top Area of Wingwall Fillet	=	2.335	sf	Height of Wingwall Fillet	=	4.90	ft
Top Area of Corner Fillet	=	2.335	sf	Height of Corner Fillet	=	2.57	ft
Volume of Concrete in Way Volume of Total Top Area	=	174.31 1368.9					
Volume Per Abutment	=	1194.6 44.246	-				
Total	=	89	су				



			PHASE		ORG	
COMPLETED BY:	CAE	74567	0		0	
CHECKED BY:	DOR	SHEET #: 31 OF	38			
PROJECT NAME:	LAK-6-2.06	DATE: 3/4/2025				
PROJECT LOCATION:	Willoughby Hills (LAK County)	SUBJECT: Quantity Calcu	ulations			
518E40000 6" PERF	DRATED CORRUGATED PLASTIC PIPE	Т	OTAL:	114.00	FT	

Total = 114 ft See LAK-6 Drainage Pipe Length Calculation



			PROJECT	PHASE		ORG
COMPLETED BY:	CAE	[74567	0		0
CHECKED BY:	DOR	s	HEET #: 32 OF	38		
PROJECT NAME:	LAK-6-2.06		DATE: 3/4/2025			
PROJECT LOCATION:	Willoughby Hills (LAK County)	SL	IBJECT: Quantity Calc	ulations		
518E40010 6" NON-F	PERFORATED CORRUGATED PLASTIC PIPE, INC	CLUD	ING SPECIALS T	OTAL:	102.00	FT

Grand Total = 102 ft See Drainage Pipe Length Calculation



<u> </u>		PI	ROJECT	PHASE		ORG
COMPLETED BY:	CAE		74567	0		0
CHECKED BY:	DOR	SHEET #:	33 OF	38		
PROJECT NAME:	LAK-6-2.06	DATE:	3/4/2025			
PROJECT LOCATION:	Willoughby Hills (LAK County)	SUBJECT:	Quantity Calc	ulations		
526E25001 REINFOR	CED CONCRETE APPROACH SLABS (T=15"), AS	S PER PLAN	т	OTAL:	209.00	SY

Reinforced Bridge Approach Slab

Area Measured in CAD for Rear Approach	=	99.39	sy
Area Measured in CAD for Forward Approach	=	109.08	sy



		PROJECT	PHASE		ORG
COMPLETED BY:	CAE	74567	0		0
CHECKED BY:	DOR	SHEET #: 34 OF	38		
PROJECT NAME:	LAK-6-2.06	DATE: 3/4/2025			
PROJECT LOCATION:	Willoughby Hills (LAK County)	SUBJECT: Quantity Calcu	ulations		
526E90010 TYPE A II	NSTALLATION	T	OTAL:	83.00	FT

Rear Approach = 40.433 ft

Forward Approach = 41.71 ft

* slightly different than usual, but similar

CH	Λ					CHA C	COMF	UT	ATION)
						F	ROJECT		PHASE		ORG
COMPLE	TED BY:	CAE					74567		0		0
CHEC	KED BY:	DOR				SHEET #:	35	OF	38		
PROJEC [®]	T NAME:	LAK-6-2.	06			DATE:	3/4/2025				
PROJECT LO	CATION:	Willough	iby H	ills (LAK County)		SUBJECT:	Quantity	Calcula	itions		
601E20000	CRUSHE	D AGGRE	GAT	E SLOPE PROTE	CTION			TOT	ſAL:	642.00	SY
	asured i		= sf	2350.6 sf 75.621 ft	Area adjusti	ng from Slope	Slope ==	= 2 1.111	26.565 deg 3		
Forward	Abutme	nt									
Area mea	asured i	n CAD	=	2674.2 sf	Area adjusti	ng from Slope	5 =	1.118	3		
Toe of Sl	оре Кеу	Length	=	78.477 ft							
Area	=	3068.4	sf								
	=	340.93	sv								
			- 1								



		PROJECT	PHASE	ORG				
COMPLETED BY:	CAE	74567	0	0				
CHECKED BY:	DOR	SHEET #: 36 OF	38					
PROJECT NAME:	LAK-6-2.06	DATE: 3/4/2025						
PROJECT LOCATION:	PROJECT LOCATION: Willoughby Hills (LAK County) SUBJECT: Quantity Calculations							
607E39901 VANDAL	PROTECTION FENCE, 6' STRAIGHT, COATED FA	ABRIC, AS PER PLAN T	OTAL: 742	2.00 FT				

Length of Protection fence over North Railing Length of Protection fence over South Railing

=	380	ft
=	361.635	ft
=	742	ft

Total



		PROJECT	PHASE		ORG
COMPLETED BY:	CAE	74567	0		0
CHECKED BY:	DOR	SHEET #: 37 OF	38		
PROJECT NAME:	LAK-6-2.06	DATE: 3/4/2025			
PROJECT LOCATION:	Willoughby Hills (LAK County)	SUBJECT: Quantity Calcu	lations		
625E33001 STRUCT	URE GROUNDING SYSTEM, AS PER PLAN	Т	OTAL:	1.00	EACH

Abutment Electrodes = 4 (Note 4 in HL-50.21)

Number at Pier 2 =	2	(Note 5 in HL-50.21)
Number at Pier 4 =	2	(Note 3 in HL-50.21)

Total = 8



		PROJECT	PHASE	ORG
COMPLETED BY:	CAE	74567	0	0
CHECKED BY:	DOR	SHEET #: 38 OF	38	
PROJECT NAME:	LAK-6-2.06	DATE: 3/4/2025		
PROJECT LOCATION:	Willoughby Hills (LAK County)	SUBJECT: Quantity Calc	ulations	
846E00111 POLYME	R MODIFIED ASPHALT EXPANSION JOINT SYST	EM, AS PER PLAN T	OTAL: 35	5.00 CF

Width =1.6667 ftThickness =0.25 ftLength of Joint Rear =40.433 ftLength of Joint Fwd. =41.71 ft

Total = 35 cf