# CLARK COUNTY DEPARTMENT OF BUILDING & FIRE PREVENTION

4701 W. Russell Road • Las Vegas, NV 89118
(702) 455-3000 • Fax (702) 221-0630

Ronald L. Lynn, Director/Building & Fire Official
Samuel D. Palmer, P.E., Assistant Director • Girard W. Page, Fire Marshal


**SUBJECT:** **TG-5-2010 - REQUIREMENTS FOR APPROVAL AS A CLARK COUNTY DEPARTMENT OF BUILDING AMUSEMENT AND/OR TRANSPORTATION SYSTEM FABRICATOR/MANUFACTURER**

**1.0 PURPOSE:** Technical Guideline (TG)-5 details the criteria and sequence to evaluate applications of approval for amusement and/or transportation system fabricators/manufacturers. Approval is a public statement of the system fabricator's/manufacturer's dedication to produce and deliver a quality system by demonstrating Quality Control (QC) compliance with standards and by adhering to an approved Quality Assurance Program (QAP).

**2.0 SCOPE:** Includes amusement and transportation systems, and may include guideway, trainway, track, and platform related software, control, emergency, communication, electrical, hydraulic, pneumatic, materials, structural, mechanical, components, subsystems, and subassemblies, as permitted by the Building Administrative Code of Clark County and the ATS Ordinance.

**3.0 ABBREVIATIONS & ACRONYMS**: Abbreviations and acronyms used within the body of this TG or referenced documents.

| | |
|---|---|
| **AISC:** | **American Institute of Steel Construction** |
| **ANSI:** | **American National Standards Institute** |
| **ASCE:** | **American Society of Civil Engineers** |
| **ASME:** | **American Society of Mechanical Engineers** |
| **ASTM:** | **American Society for Testing and Materials** |
| **ATS:** | **Amusement and Transportation System** |
| **CSA:** | **Canadian Standards Association** |
| **CCDB:** | **Clark County Department of Building** |
| **DIN:** | **Deutsches Institut für Normung (German Institute for Standardization)** |
| **ISO:** | **International Standards Organization** |
| **NEC:** | **National Electric Code** |
| **NRTL:** | **National Recognized Testing Laboratory** |
| **NFPA:** | **National Fire Protection Association** |
| **QA:** | **Quality Assurance** |
| **QSM:** | **Quality System Manual** |
| **SAE:** | **Society of Automotive Engineers** |
| **UL:** | **Underwriter's laboratory, Inc.** |

**4.0 DEFINITIONS:** The definitions below are specific to this document and are supplemental to those contained in the Building Administrative Code of Clark County.

ATS Element: ATS structural, electrical, mechanical, control, station, or other major constituent component(s) or combinations of, that are part of an ATS System and/or device. Examples include, but are not limited to, track, guideway, propulsion/drive system, traction power, ropeway, train cars, etc.

**APPROVED DATE: May 6, 2010**
**EFFECTIVE DATE: May 7, 2010**

| Revised By | Concurred By | Approved By |
|---|---|---|
| *Antonio Garcia* | *David L. Durkee* | *Ted Droessler* |
| **Antonio Garcia**<br>**Associate Engineer** | **David L. Durkee, P.E.**<br>**Principal Engineer** | **Theodore L. Droessler, P.E.**<br>**Engineering Manager** |

ATS Fabricator/Manufacturer: A fabricator/manufacturer granted approval by CCDB for the fabrication/manufacture of a specific ATS device/element or ATS major-modification as defined by the ATS Ordinance.

Auditor Instructions & Procedures (AIP): CCDB provided instructions and/or procedures to be followed and met by a "CCDB approved" auditor to perform certain ATS initial, production, final, and/or other audit, testing, verification or validation activity functions as deemed necessary by CCDB.

Audit Package (AP): The audit package contains the Auditor Instructions & Procedures, audit questions, and/or other materials, deemed necessary to perform an audit.

Conditional Approval: An approval status that may be granted to an ATS fabricator/manufacturer based on a review of the ATS device or ATS element QA program. This approval status allows an ATS fabricator/manufacturer to commence and continue to work while allowing time to respond to CCDB comments or to perform required production audits, tests, or other required validation/verification activities.

Controlled Document: Any document for which the distribution, implementation, and/or revision status are to be kept current by the issuer.

Documents & Forms Package (DFP): A CCDB package containing documents and forms initially completed during an ATS Fabricator/Manufacturer presubmittal meeting.

Quality Assurance Program (QAP): An in-house Quality Assurance (QA) program that oversees fabrication/manufacturing related activities, that may include but are not limited to, regarding design, development, fabrication/manufacturing, production, installation, servicing, NRTL listing, documentation, testing, verification and validation. May also include the regulation of the quality of raw materials, assemblies, products and components; configuration-management and document-control; and inspection processes. QAP may be certified by a CCDB accepted RSO (Recognized Standardization Organization) or QAP may be in accordance with ASTM F 1193-06, Standard Practice for Quality, Manufacture, and Construction of Amusement Rides and Devices.

Quality Systems Manual (QSM): A manual that details, as a minimum, quality related procedures, implemented to control the ATS fabrication/manufacturing processes.

**5.0 REFERENCES:** The following codes and standards are adopted and applicable editions verified on a project-by-project basis.

International Building Code (IBC)
Building Administrative Code of Clark County
Amusement and Transportation System Code
ANSI B77.1, American National Standard for Passenger Ropeways-Aerial Tramways, Aerial Lifts, Surface Lifts, Tows and Conveyors-Safety Requirements
ANSI B77.2, American National Standard for Funiculars-Safety Requirements
ASCE Standard 21, Automated People Mover Standards-Part 1
ASCE Standard 21, Automated People Mover Standards-Part 2
ASCE Standard 21, Automated People Mover Standards-Part 3
ASTM F 698, Physical Information to be Provided for Amusement Rides and Devices
ASTM F 770, Standard Practice for Ownership & Operation of Amusement Rides and Devices
ASTM F 846, Standard Practice for Testing Performance of Amusement Rides and Devices
ASTM F 853, Standard Practice for Maintenance Procedures for Amusement Rides and Devices
ASTM F 893, Standard Guide for Inspection of Amusement Rides and Devices
ASTM F 1159, Standard Practice for Design and Manufacture of Amusement Rides and Devices
ASTM F 1193, Standard Practice for Quality, Manufacture, & Construction of Amusement Rides & Devices
ASTM F 1305, Standard Guide for Classification of Amusement Ride and Device Related Injuries and Illnesses
ASTM F 1950, Standard Specifications for Physical Information to be Transferred with Used Amusement Ride and Devices

ASTM F 2007, Standard Practice for Classification, Design, Manufacturer, and Operation of Concession Go- Karts and Facilities
ASTM F 2137, Standard Practice for Measuring the Dynamic Characteristics of Amusement Ride and Devices
ASTM F 2291, Standard Practice for Design of Amusement Ride and Devices
AS/NZS 5848, Australian/New Zealand Standard Code of Practice for Bungy Jumping
NFPA 70, National Electric Code (NEC)
NFPA 160, Standard for Use of Flame Affects Before an Audience
NFPA 130, Standard for Fixed Guideway Transit and Passenger Train Systems

**6.0 RESPONSIBILITIES:** It is the responsibility of the following entities to perform the following functions:

**6.1 Clark County**

**6.1.1** Provide ATS Fabricator/Manufacturer Application Package (AFMAP).

**6.1.2** Review ATS applicant's submitted QAP documentation.

**6.1.3** Determine if the applicant's QSM complies with specified requirements.

**6.1.4** Provide the approved third-party auditor with Auditor Instructions & Procedures (AIP).

**6.1.5** Perform ATS fabricator/manufacturer in-plant Initial Audits (IA) or under special cases, give directions, via the Auditor Instructions & Procedures (AIP), to third-party auditor to perform audit(s) on behalf of Clark County.

**6.1.6** Notify applicant of approval status.

**6.1.7** Maintain CCDB approved Third Party Auditor Listing.

**6.2 Fabricator/Manufacturer**

**6.2.1** Contact CCDB to schedule an ATS fabricator/manufacturer pre-submittal meeting.

**6.2.2** Prepare an application (ATS Fabricator/Manufacturer Application Package (AFMAP)).

**6.2.3** Submit a completed AFMAP and required documents along with the required fee.

**6.2.4** Submit a controlled copy of the QSM.

**6.2.5** Make any necessary changes to the QSM in order to meet the requirements.

**6.2.6** Maintain QSM during the fabrication/manufacturing of project-specific ATS.

**6.2.7** Notify CCDB of any QSM changes and submit revisions to CCDB.

**6.2.8** If required by CCDB, arrange for CCDB and/or approved third-party auditors to perform an Initial Audit (IA) and/or other required audits.

**6.3 Quality Assurance Agency**

**6.3.1** Request CCDB Auditor Instructions & Procedures (AIP).

**6.3.2** Perform audit(s) and submit audit findings to CCDB for review.

**6.3.3** Submit amendments as required.

**7.0 PROCEDURE:** To become a CCDB "approved" ATS Fabricator/Manufacturer, the applicant contacts Clark County Department of Building to request approval to fabricate/manufacturer a project-specific Amusement/Transportation System. Approval may be based on an in-house Quality Assurance Program (QAP) conforming to the requirements of either ASTM F 1193, an in-house QAP as certified by a CCDDS-IS recognized standardization organization (ISO, TUV, DIN, NRTL, UL, etc), or other QAP system acceptable to CCDB. See Attachment "A" for a procedural process flowchart of the below procedures.

**7.1 ATS Fabricator/Manufacturer Application Package (AFMAP)/Presubmittal Meeting (PM):** During the meeting, a project-specific Documents & Forms Package (DFP) shall be completed to establish the QAP and QSM requirements and determine if any audits and/or verification/validation activities are required. This DFP shall be employed and referred to by all involved entities, including Clark County, as a guideline to ensure ATS fabricator/manufacturer compliance and shall be submitted as part of the ATS Fabricator/Manufacturer Application Package (AFMAP). A separate application is required for each separate fabrication/manufacturing facility. This package may also include an Auditor Instructions & Procedures (AIP) package.

**7.1.1** Applicant contacts CCDB to schedule a presubmittal meeting.

**7.1.2** Presubmittal meeting is held and DFP is completed and approved by CCDB.

**7.1.3** Applicant obtains ATS Fabricator/Manufacturer Application Package (AFMAP).

**7.1.4** Applicant submits completed AFMAP along with the "approved" DFP to CCDB along with a check payable to the Clark County Department of Building in the amount specified on the application. The application shall clearly state the type of ATS system, element, device, or component to be fabricated/manufactured, the ATS name and address.

**7.2 Quality Assurance Program (QAP) & Quality System Manual (QSM):** CCDB shall review the AFMAP and applicant shall submit a "controlled" QSM to CCDB for review.

Note: Manuals are required to be reviewed and accepted by CCDB. Manual shall detail procedures that ensure compliance with CCDB fabricator/manufacturer program and ATS Ordinance compliance, ASTM F 1193-06, and/or as required to maintain registration certification with a CCDB recognized standardization organization.

**7.2.1** QSM shall be in accordance with one of the following:

Fabricator/manufacturer is certified by a CCDB recognized standardization organization: Applicant submits a "controlled" QSM copy and evidence of current certification by such organization. The fabricator/manufacturer shall also submit a copy of the latest, within last year, in-plant audit performed by the certifying organization.

Fabricator/manufacturer has an existing in-house QAP compliant with ASTM F 1193 and QSM compliant with ASTM F 1193/1159: Applicant submits a "controlled" QSM copy.

Fabricator/manufacturer does not have an existing in-house QAP and QSM: Applicant writes and submits a "controlled" QSM copy per ASTM F 1193/1159.

**7.2.2** CCDB reviews QSM for compliance with required standards/requirements.

**7.2.3** If QSM is not compliant, applicant revises QSM.

Note: If submitted AFMAP, QAP and or certification documents are not compliant per CCDB requirements**, t**he fabricator/manufacturer shall review the documents and amend or revise their QSM as necessary to comply. Compliance shall be in accordance with the ATS Ordinance, ATS DFP, TG and/or other CCDB ATS requirements. In the case when the applicant does not have an in-house QAP and QSM, compliance shall be, in addition to the above referenced, in accordance with ASTM F 1193 (Standard Practice for Quality, Manufacture, & Construction of Amusement Rides & Devices) and ASTM F

1159 (Standard Practice for Design and Manufacture of Amusement Rides and Devices).

**7.2.4** Applicant resubmits QSM to CCDB.

**7.2.5** Once compliant QSM is accepted by CCDB, then any CCDB required audits and verification/validation activities shall be scheduled.

**7.3** **Audits:** If required by CCDB during the pre-submittal meeting, it will be determined by CCDB whether CCDB or a CCDB approved third-party will perform an Initial Audit (IA) and/or other audits.

**7.3.1** No IA or additional audits are required to be performed:

**7.3.1.1** Approval is granted as per 7.3.6.

**7.3.2** IA or additional audits are required to be performed by CCDB:

**7.3.2.1** Applicant shall make the necessary arrangements for CCDB to perform the in- plant ATS fabricator/manufacturer audit.

**7.3.2.2** CCDB performs an on-site IA.

**7.3.3** IA or additional audits are to be performed by a third-party:

**7.3.3.1** The applicant shall contact CCDB and obtain a listing of the approved third party auditors prior to arranging the in-plant ATS Initial Audit. The applicant shall then contact and contract an approved third party auditor and schedule the audit.

**7.3.3.2** The approved third-party auditor, contracted by the applicant to perform the in- plant audit, shall contact CCDB and request an Auditor Instructions and Procedures (AIP) package.

**7.3.3.3** CCDB shall verify that the auditor has a current CCDB approval, and shall then send a plant-specific AIP package to the auditor.

**7.3.3.4** The approved third party auditor shall perform the in-plant audit and submit the completed Audit Package (AP) to CCDB.

**7.3.4** CCDB shall conduct a review based on the applicant's QAP, the submitted "controlled" QSM, and the submitted AP for the in-plant IA. A determination will then be made as to whether or not the fabricator's/manufacturer plant and in-house QAP meet CCDB approval requirements. CCDB will review the QAP, QSM and IA results/observations.

**7.3.5** If the applicant does not meet the CCDB approval requirements, CCDB will contact applicant and issue a letter regarding the non-compliance(s). The applicant shall make necessary revisions and addendums to their QAP, QSM and shall then resubmit documents to CCDB.

**7.3.6** Upon approval requirements, CCDB will issue the fabricator/manufacturer an **"Approval Notification Letter"**. The one-time project-specific listing of the approved fabricators/manufacturers shall be maintained by CCDB and approval shall expire at completion of project.

Note: If conditional items or additional audit activities are required, CCDB may "conditionally" approve the ATS fabricator/manufacturer and CCDB may issue the fabricator/manufacturer a **"Conditional Approval Letter"** noting the conditions of approval.

## 8.0 RECORDS

**8.1** The QSM shall be a controlled document.

**8.2** A master list of all in possession of controlled copies of the QSM shall be generated and maintained by the originating organization. During the duration of the fabrication/manufacture of the ATS, fabricator shall provide to CCDB all revisions of the QSM for review and approval.

**8.3** Submitted approved documents will be retained by in accordance with CCDB records policy.

## 9.0 ATTACHMENTS

**9.1** Approval Process for Fabrication/Manufacture of Amusement/Transportation Systems and Devices. (ATTACHMENT "A")

**9.2** **AFMAP:** ATS Fabricator/Manufacturer Application Package (ATTACHMENT "B")

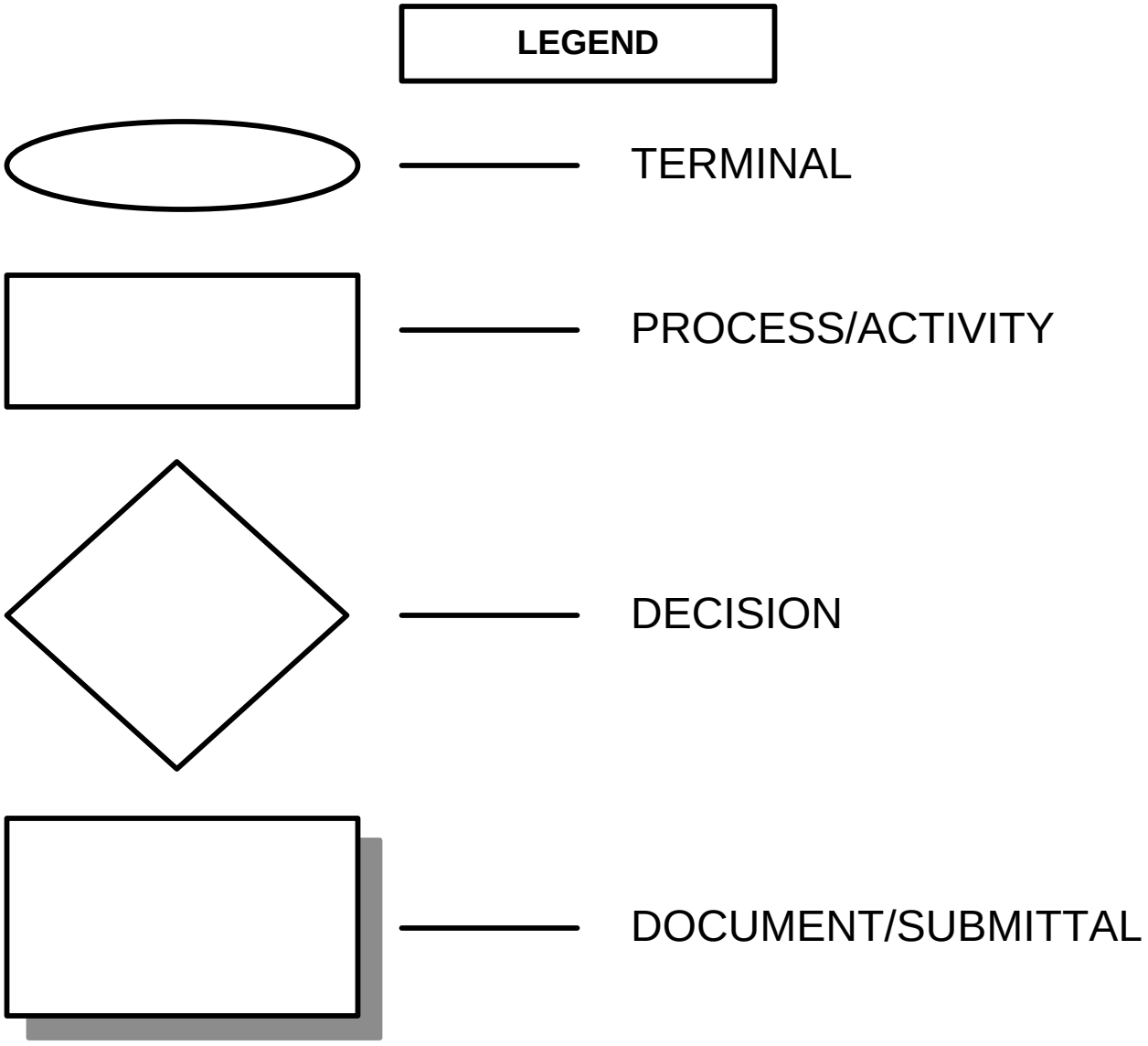
**9.3** **DFP:** Documents & Forms Package (ATTACHMENT "C")

## 10.0 REVISION HISTORY:

| Title | Revision/Approved Date | Effective Date |
|---|---|---|
| TG-5-2010 | May 5, 2010 | May 7, 2010 |

# ATTACHMENT "A"

## Approval Process for Fabrication/Manufacture of Amusement/Transportation Systems & Devices

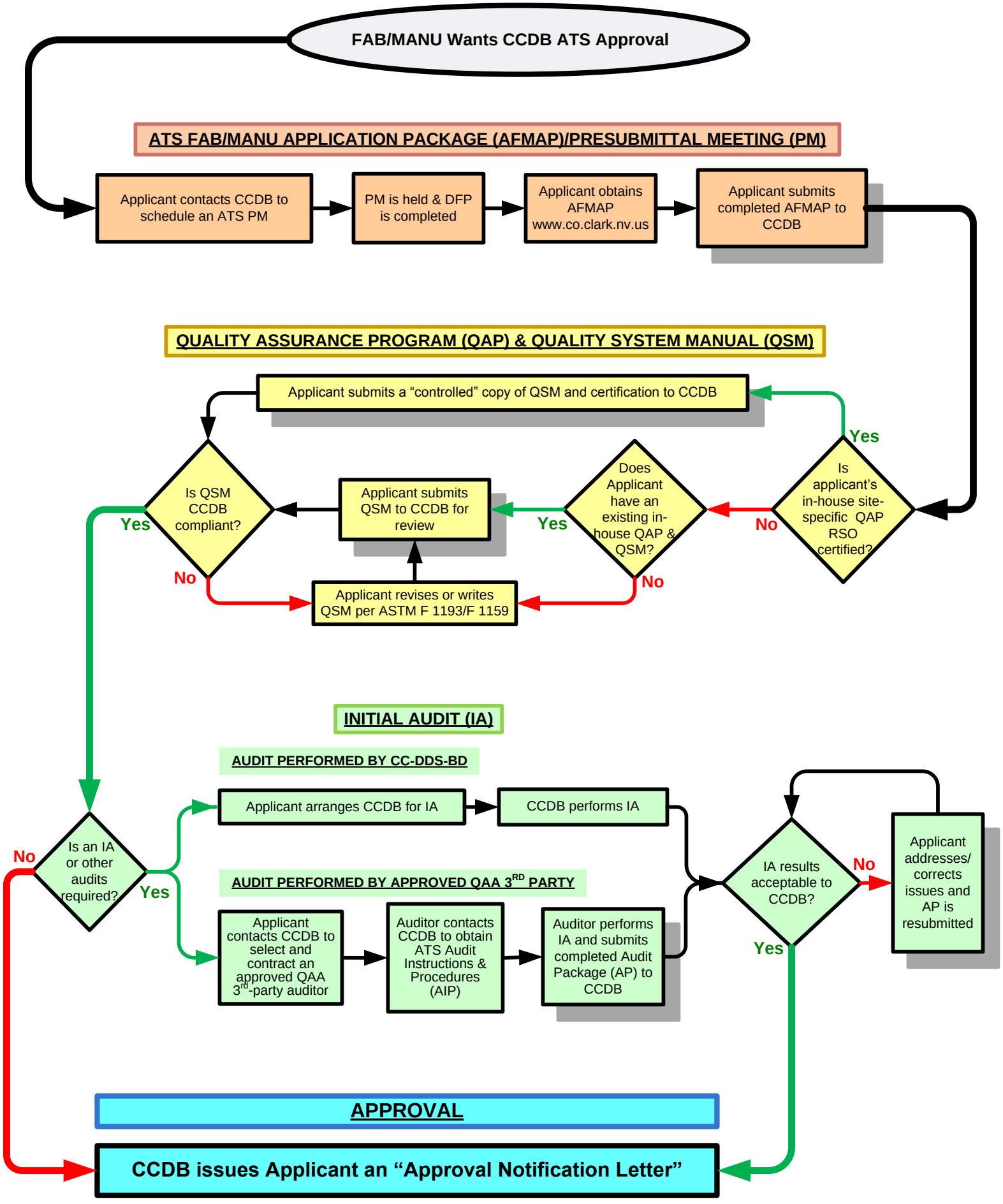



## ACRONYMS/ABBREVIATIONS

| | |
|---|---|
| **AFMAP** | **ATS FABRICATOR/MANUFACTURER APPLICATION PACKAGE** |
| **AP** | **AUDIT PACKAGE** |
| **AIP** | **AUDITOR INSTRUCTIONS AND PROCEDURES** |
| **PM** | **PRESUBMITTAL MEETING** |
| **CCDDS-BD** | **CLARK COUNTY DEPARTMENT OF DEVELOPMENT SERVICES, BUILDING DIVISION (INSPECTION SERVICES-ENGINEERING)** |
| **DFP** | **DOCUMENTS & FORMS PACKAGE** |
| **FAB/MANU** | **FABRICATOR/MANUFACTURER** |
| **IA** | **INITIAL AUDIT** |
| **QAA** | **QUALITY ASSURANCE AGENCY (CCDDS-BD APPROVED THIRD-PARTY)** |
| **QAP** | **QUALITY ASSURANCE PROGRAM** |
| **QSM** | **QUALITY SYSTEMS MANUAL** |
| **RSO** | **RECOGNIZED STANDARDIZATION ORGANIZATION** |

# ATTACHMENT "A" (continued)

## Approval Process for Fabrication/Manufacture of Amusement/Transportation Systems & Devices



# Clark County Department Of Building & Fire Prevention

4701 West Russell Road, Las Vegas, NV 89118 ~ (702) 455-3000

## Amusement/Transportation System (ATS)
## Fabricator/Manufacturer Application Package (AFMAP)

Ronald L. Lynn, Director/Building Official • Samuel D. Palmer, PE., Assistant Director

ATS Project Name: _____

ATS Permit/Permit Application: _____

ATS Element: _____

Company Name: _____

QC Manager Name: _____

Plant Location Address: _____

City: _____ State: _____ Zip: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____ Fax: _____

E-Mail Address: _____

### FEES REQUIRED TO BE SUBMITTED WITH APPLICATION

☐ Project-Specific/Plant-Specific Approval ($360.00)

### ONE-TIME PROJECT-SPECIFIC APPROVAL

**All ATS Fabricator/Manufacturers shall provide the following ATS Pre-Submittal Documents:**

☐ This Application ☐ Documents Forms Package ☐ Controlled copy of latest edition Quality Systems Manual (QSM)

☐ Other: _____

☐ CCBD Approved Auditing Agency: _____

**Fabricators/Manufacturers certified by a CCBD Recognized Standardization Organization RSO:**

☐ Copies of Current Certification ☐ Copy of Latest In-Plant Audit

**RETURN THIS APPLICATION FORM WITH YOUR CHECK TO THE FOLLOWING ADDRESS:**

Clark County Department of Building
Inspection Services
Antonio Garcia, Associate Engineer
4701 W. Russell Road
Las Vegas, Nevada 89118

Phone Number:
(702)455-8091

**Please submit a company check or money order payable Clark County Department of Building.**
**Include all required documentation with each application.**

**Applicant Signature:** _____ Date: _____



Save Form Reset Form Print Form

# ATTACHMENT "C" ATS Documents & Forms Package (DFP)

## ATS DOCUMENT FORMS PACKAGE

**ATS NAME:** _____ **DATE:** _____

### ATS INFORMATION

(Enter known proposed information)

**ATS Name:** _____

**Installation Name:** _____

**ATS Owner:** _____

**ATS Operator:** _____

**ATS Designer/ Engineer:** _____

**Engineer of Record** _____

**Third-Party QAA:** _____

**Fabricator(s):** _____

**Installation Date:** _____

**Additional Information:** _____
**(Write in information and/or attach to the back of this sheet)**

# ATS Documents & Forms Package (DFP) (continued):

**ATS NAME:**_____ **DATE:** _____

## AMUSEMENT/TRANSPORTATION TYPE:

☐ **AMUSEMENT/DEVICE TYPE: (Check all that apply)**

- ☐ Roller Coaster
- ☐ Motion Base/Simulator
- ☐ Elevator Simulator
- ☐ Ferris Wheel
- ☐ Carousel/Merry-Go-Round
- ☐ Bumper Cars
- ☐ Boat
- ☐ Flume
- ☐ Guided/Fixed Course
- ☐ Unguided/Unfixed Course
- ☐ Dark/Enclosed Ride
- ☐ Mechanical Swing
- ☐ Suspended Aerial
- ☐ Horizontal Rotary
- ☐ Vertical Rotary
- ☐ Water Slide
- ☐ Go-Kart Track
- ☐ Inflatable
- ☐ Kiddie Ride
- ☐ LIM Propulsion
- ☐ Attraction
- ☐ Other: _____

Additional Ride/Device Description:

☐ **TRANSPORTATION SYSTEM TYPE: (Check all that apply)**

- ☐ Automated People Mover
- ☐ Non-Automated People Mover
- ☐ Aerial/Suspended Tramway
- ☐ Surface Towed
- ☐ Funicular
- ☐ Elevated Guideway
- ☐ At Grade Guideway
- ☐ Tunnel
- ☐ Concrete Guideway
- ☐ Steel Guideway
- ☐ Platform Automatic Doors
- ☐ Station/Car Attendants
- ☐ Number of Dedicated Stations: ____
- ☐ Number of Mixed Stations: ____
- ☐ Electrical Propulsion
- ☐ Ropeway Propulsion
- ☐ Parallel Guideway
- ☐ Guideway Emergency Walkway
- ☐ At Grade Emergency Walkway
- ☐ Other: _____

Additional Transportation Description:

# ATS Documents & Forms Package (DFP) (continued):

**ATS NAME:**_____ **DATE:**_____

## STRUCTURAL/DYNAMIC DESIGN

**Structural/Dynamic design shall include, but shall not be limited to, the following:**
• Material Design (Steel, Alloy, Composite, Concrete, Wood, etc)
• Vehicle/train, guideway/track, ropeway, motion and drive structural static/dynamic calculations & drawings
• Structural high-strength bolting calculations and design details
• Other applicable stmch1ral design documents as required

**STRUCTURAL/DYNAMIC DESIGN STANDARDS:** (As deemed applicable, the following checked standards, or applicable portions thereof, shall be employed)

| | |
|---|---|
| ☐ | ASTM F 2137-04, Standard for Measuring the Dynamic Characteristics of Amusement Rides and Devices |
| ☐ | ASTM F 1159-02, Standard Practice for Design and Manufacture of Amusement Rides and Devices |
| ☐ | F 2291-06a,Standard Practice for Design of Amusement Rides and Devices |
| ☐ | ASTM F 2007-07, Standard Practice for Classification, Design, manufacture, and Operation of Concession Go-Karts and Facilities |
| ☐ | ASCE Standard 21-05, Automated People Mover Standards-Part 1 (Operating Environment, Safety Requireu1euls, System Dependability, Automatic Train Control (ATC), and Audio and Visual Communications) |
| ☐ | ASCE Standard 21-98, Automated People Mover Standards-Part 2 (Vehicles, Propulsion and Braking) |
| ☐ | ASCE Standard 21-00, Automated People Mover Standards-Part 3 (Electrical, Stations, and Guideways) |
| ☐ | NFPA 130-2007, Standard for Fixed Guideway Transit and Passenger Rail Systems |
| ☐ | ANSI B77.1-2004, American National Standard for Passenger Ropeways-Aerial Tramways, Aerial Lifts, Surface Lifts, Tows and Conveyers-Safety Requirements |
| ☐ | ANSI B77.2-2004, American National Standard for Funiculars-Safety Requirements |
| ☐ | AS/NZ 5848:2000, Australian/New Zealand Standard-Code of practice for bungee jumping |
| ☐ | NFPA 160-2006, Standard for the Use of Flame Effects Before and Audience |
| ☐ | Other applicable codes/standards (i.e. UBC, AISC, etc):_____ |
| ☐ | Other Alternate Standard(s) (i.e. ASME, NFPA,SAE, DIN, UL, CSA, etc):_____ |

Notes/Comments:

**Important Note:** Refer to the Clark County ATS Ordinances for amendments to the above listed standards.

# ATS Documents & Forms Package (DFP) (continued):

**ATS NAME:**_____ **DATE:**_____

## MECHANICAL DESIGN

**Mechanical design shall include, but shall not be limited to, the following:**

- Vehicle/train, guideway/track, ropeway. motion and drive mechanical design calculations and drawings
- Hydraulic and pneumatic design
- Electro -mechanical design
- Mechanical bolting/fastener calculations and design details
- Dynamic Envelope drawings
- Third-party mechanical component and assembly inspection and labeling by NRTL (Nationally Recognized Testing Laboratory)
- Other applicable mechanical design documents as required

**MECHANICAL DESIGN STANDARDS:** (As deemed applicable, the following checked standards, or applicable portions thereof, shall be employed)

| | |
|---|---|
| ☐ | ASTM F 2137-04, Standard for Measuring the Dynamic Characteristics of Amusement Rides and Devices |
| ☐ | ASTM F 1159-02, Standard Practice for Design and Manufacture of Amusement Rides and Devices |
| ☐ | F 2291-06a,Standard Practice for Design of Amusement Rides and Devices |
| ☐ | ASTM F 2007-07, Standard Practice for Classification, Design, manufacture, and Operation of Concession Go-Karts and Facilities |
| ☐ | ASCE Standard 21-05, Automated People Mover Standards-Part 1 (Operating Environment, Safety Requirements, System Dependability, Automatic Train Control (ATC), and Audio and Visual Communications) |
| ☐ | ASCE Standard 21-98, Automated People Mover Standards-Part 2 (Vehicles, Propulsion and Braking) |
| ☐ | ASCE Standard 21-00, Automated People Mover Standards-Part 3 (Electrical, Stations, and Guideways) |
| ☐ | NFPA 130-2007, Standard for Fixed Guideway Transit and Passenger Rail Systems |
| ☐ | ANSI B77.1-2004, American National Standard for Passenger Ropeways-Aerial Tramways, Aerial Lifts, Surface Lifts, Tows and Conveyers-Safety Requirements |
| ☐ | ANSI B77.2-2004, American National Standard for Funiculars-Safety Requirements |
| ☐ | AS/NZ 5848:2000, Australian/New Zealand Standard-Code of practice for bungee jumping |
| ☐ | NFPA 160-2006, Standard for the Use of Flame Effects Before and Audience |
| ☐ | Other applicable codes/standards (i.e. UBC, AISC, etc):_____ _____ |
| ☐ | Other Alternate Standard(s) (i.e. ASME, NFPA,SAE, DIN, UL, CSA, etc):_____ _____ |

Notes/Comments:

**Important Note:** Refer to the Clark County ATS Ordinances for amendments to the above listed standards.

# ATS Documents & Forms Package (DFP) (continued):

**ATS NAME:**_____ **DATE:** _____

## OPERATIONS

**Operational manual shall include, but shall not be limited to, the following:**

- ATS operational instructions, procedures and practices
- Ownership operational practices
- Operational related injuries and illnesses
- Other operational related requirements as required
- Operations-staff training program

**OPERATIONS STANDARDS:** (As deemed applicable, the following checked standards. or applicable portions thereof, shall be employed)

| | |
|---|---|
| ☐ | ASTM F 770-06a, Standard Practice for Ownership & Operation of Amusement Rides & Devices |
| ☐ | ASTM F 1305-94 (Reapproved 2002), Standard Guide for Classification of Amusement Ride and Device Related Injuries and Illnesses |
| ☐ | ASTM F 2007-07, Standard Practice for Classification, Design manufacture, and Operation of Concession Go-Karts and Facilities |
| ☐ | Other Alternate Standard(s): _____ _____ |

Notes/Comments:

**Important Note:** Refer to the Clark County ATS Ordinances for amendments to the above listed standards.

# ATS Documents & Forms Package (DFP) (continued):

**ATS NAME:**_____ **DATE:** _____

## MAINTENANCE

**Maintenance manual shall include, but shall not be limited to, the following:**

- ATS maintenance instructions, procedures and practices
- Routine inspection program
- Ownership maintenance practices
- Inspection procedures for during prototype development. production manufacturing, installation or erection, following major modification or overhaul, and during post incident operation and maintenance periods
- Lock-out and Tag-Out procedures for electrical and mechanical power
- Other maintenance related requirements as required
- Maintenance-staff training program

**MAINTENANCE STANDARDS:** (As deemed applicable, the following checked standards, or applicable portions thereof, shall be employed)

| | |
|---|---|
| ☐ | ASTM F 853-05, Standard Practice for Maintenance Procedures for Amusement Rides and Devices |
| ☐ | ASTM F 893-05a. Standard Guide for Inspection of Amusement Rides and Devices |
| ☐ | ASTM F 2007-07, Standard Practice for Classification, Design manufacture, and Operation of Concession Go-Karts and Facilities |
| ☐ | Other Alternate Standard(s): _____ _____ |

Notes/Comments:

**Important Note:** Refer to the Clark County ATS Ordinances for amendments to the above listed standards.

# ATS Documents & Forms Package (DFP) (continued):

**ATS NAME:**_____ **DATE:**_____

## ELECTRICAL, CONTROL, AND PROPULSION/PO,VER DESIGN

**Electrical, control, and propulsion power designs shall include, but shall not be limited to, the following:**

- Installation of electrical systems per the National Electric Code requirements per Clark County
- Industry electrical practices
- Third-party component and system inspection by NRTL (Nationally Recognized Testing Laboratory)
- Other electrical related requirements as required

**ELECTRICAL, CONTROL, & PROPULSION/POWER DESIGN STANDARDS:** (As deemed applicable, the following checked standards, or applicable portions thereof, shall be employed)

| | |
|---|---|
| ☐ | NFPA -70 (Revision as currently adopted by Clark County) |
| ☐ | ASTM F 1159-02, Standard Practice for Design and Manufacture of Amusement Rides and Devices |
| ☐ | ASTMF 2291 -06a,Standard Practice for Design of Amusement Rides and Devices |
| ☐ | ASTM F 2007-07, Standard Practice for Classification, Design, manufacture, and Operation of Concession Go-Karts and Facilities |
| ☐ | ASCE Standard 21 -05, Automated People Mover Standards-Part 1 (Operating Environment, Safety Requirements, System Dependability, Automatic Train Control (ATC), and Audio and Visual Communications) |
| ☐ | ASCE Standard 21-98, Automated People Mover Standards-Part 2 (Vehicles, Propulsion and Braking) |
| ☐ | ASCE Standard 21 -00, Automated People Mover Standards-Part 3 (Electrical, Stations, and Guideways) |
| ☐ | NFPA 130-2007, Standard for Fixed Guideway Transit and Passenger Rail Systems |
| ☐ | ANSI B77.1-2004, American National Standard for Passenger Ropeways-Aerial Tramways, Aerial Lifts, Surface Lifts, Tows and Conveyers-Safety Requirements |
| ☐ | ANSI B77.2-2004, Al11erican National Standard for Funiculars-Safety Requirements |
| ☐ | Other Alternate Standard(s) (i.e. NEC, DIN, UL, CSA, etc): _____ _____ |

Notes/Comments:

**Important Note:** Refer to the Clark County ATS Ordinances for amendments to the above listed standards.

# ATS Documents & Forms Package (DFP) (continued):

**ATS NAME:**_____ **DATE:**_____

## LIFE-SAFETY DESIGN

Life-safety provisions for ATS shall be incorporated into the design and shall include, but shall not be limited to, the following:

- Egress and exiting
- Smoke control and Fire protection
- UPS and back-up power systems
- Signage and Audio-Visual communications
- Power disconnecting/removal means
- Emergency evacuation
- Emergency AHJ (Authority Having Jurisdiction) incident reporting ERA (Emergency Responding Agency) responsibilities and involvement
- Lock-Out & Tag-Out procedures
- Operational staff emergency procedures and training

**LIFE-SAFETY STANDARDS:** (As deemed applicable, the following checked standards, or applicable portions thereof, shall be employed)

| | |
|---|---|
| ☐ | NFPA -70 (Revision as currently adopted by Clark County) |
| ☐ | ASTM F 1159-02, Standard Practice for Design and Manufacture of Amusement Rides and Devices |
| ☐ | ASTM F 1193, Standard Practice for Quality, Manufacture, & Construction of Amusement Rides & Devices |
| ☐ | Amusement and Transportation System Code (Section 22.16.290) |
| ☐ | ASTM F 2291-06a,Standard Practice for Design of Amusement Rides and Devices |
| ☐ | ASTM F 2007-07, Standard Practice for Classification, Design, manufach1re, and Operation of Concession Go-Karts and Facilities |
| ☐ | ASCE Standard 21-05, Automated People Mover Standards-Pmt **1** (Operating Environment, Safety Requirements, System Dependability, Automatic Train Control (ATC), and Audio and Visual Communications) |
| ☐ | ASCE Standard 21-98, Automated People Mover Standards-Part 2 (Vehicles, Propulsion and Braking) |
| ☐ | ASCE Standard 21 -00, Automated People Mover Standards-Part 3 (Electrical, Stations, and Guideways) |
| ☐ | NFPA 130-2007, Standard for Fixed Guideway Transit and Passenger Rail Systems |
| ☐ | ANSI B77.1 -2004, American National Standard for Passenger Ropeways-Aerial Tramways, Aerial Lifts, Surface Lifts, Tows and Conveyers-Safety Requirements |
| ☐ | ANSI B77.2-2004, American National Standard for Funiculars-Safety Requirements |
| ☐ | Other Alternate Standard(s) (i.e. ASME, NFPA,SAE, DIN, UL, CSA, etc):_____ _____ |

Notes/Comments:

**Important Note:** Refer to the Clark County ATS Ordinances for amendments to the above listed standards.